

Contents for January, 1932.

Illustrations.	
Steps for Orchards	13
Subjects.	
Apple and Pear Crops in New South Wales	47
Apples—Nature's Dentifrice	21
Armilaria (Root Rot)	13
Australian and New Zealand Fruit Export	24
Banana Growers in New South Wales	47
Bananas and Pineapples	37, 38
Canada—Export to	21
Double Yolk Eggs	46
Egg Export	47
Fruit Cool Stores	20
Fruit Markets in the East	33, 4
Fruit Tree Plantings in 1931	27, 28
Green Manuring	28
Griffeth, C. M., Death of	12
Market News and Notes	42, 43
Mornington Peninsula	23
New South Wales	39, 47, 48
New Zealand	44
Oranges, Value of	24
Passionfruit—Storage of	13
Poultry Raising	46-7
Powdery Mildew	47
Problem of the Off Year	29
Queensland	37, 38
Research in Fruit Culture	31
Research Work, Importance of	22
South Australia	31
South Australian Citrus Marketing Act	17
South Australian Fruit Marketing Association	18
South Australian News and Notes	17, 18
Steps for Orchards	13
Sultana Drying Experiments	25, 26
"Sunbeam" Strawberry	36
Tasmanian Fruit Exports	32
Tasmania—The Isle of Enchantment	14, 15
Thinning Apples	29
Thrips	19, 20
Tobacco Culture	40
Trade with Germany	38
Unwary Growers Tricked	43
Victorian Crop Reports	11
Victorian Fruit Council	12
Victorian Fruit Marketing Association	19, 20
Victorian Orchard Districts	23, 24
Walnuts—Diseases in	12
Waste Fruit, Disposal of	31
Werribee Research Farm	22
Western Australia	16

INDEX TO ADVERTISERS.

Canning Machines—
Austral Otis Andabar Cannery Equipment Pty. Ltd., South Melbourne, p. 54.
Cold Storage—
Bender & Co., Launceston, Tas., cover II.
Fruit Buyers—
Brooke, C. M., & Sons, S. Melb., p. 4.
Fruit Tree Suppliers—
Brunling, John, & Sons, Somerville, p. 39.
Nobelius, C. A., & Sons, Emerald, Vic., p. 51.
Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), p. 28.
Fruit Graders—
"Lightning," Lightning Fruit Grader Co., 517 Albion-street, W. Brunswick, N.12, Vic., front cover.
Manures, Fertilisers, &c.—
Sulphate of Ammonia, Nitrogen Fertilisers Pty. Ltd., Melb., p. 36.
Patent Attorney—
U'Ren, Geo. A., Melb., p. 48.
Poultry—
Karswood Poultry Spice, Agents all States, p. 46.

Refrigerating Machinery—

Werner, R., & Co. Pty. Ltd., Richmond, cover iii.

Spray Materials—

"Black Leaf 40," Tobacco By-Products and Chemical Corp., p. 50.
 "Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, V., p. 1.
 "Clensel," Bruce Anderson, Camberwell, Vic., p. 39.
 "Cooper" Sprays, William Cooper & Nephews (Aust.) Ltd., Sydney, and agents, back outside cover.
 "Elephant" Brand, Jacques Pty. Ltd., Burnley, V., p. 10.
 "Shell Spraying Oil," Shell Co. of Australia Ltd., Melbourne, p. 37.

Orchard Implements—

Excelsior Supply Co. Ltd., p. 23.
 "Vallo" Sprays, Victor Leggo & Farmers, p. 45.
 "Yolk," H. C. Pannifex & Co., Melbourne, and agents, p. 37.
 "Neptune" Spraying Oils, Neptune Oil Co. Ltd., Richmond, Vic., and all States, p. 7.

Spray Pumps and Guns—

Russell & Co., p. 48.

Strapping Fruit Cases—

Gerrard Wire Tying Machines Co. Pty. Ltd., W. Melb., p. 32.

Tobacco Planters—

D. Harvey, Box Hill, p. 41.

Transport—

London & North-Eastern Railway, P. E. Potts, 7 Bridge-street, Sydney, p. 9.
 Port of London, Capt. A. W. Pearse, 10 Bligh-street, Sydney, N.S.W., p. 45.
 Port of Manchester, Capt. W. J. Wade, Sydney, p. 3.
 Interstate Shipowners, p. 49.

Tree and Stump Pullers—

Trehwella Bros., Trentham, p. 55.
 "Digger," Quick Mfg. Co., Stumping Jacks, etc., p. 51.

VICTORIA.

Crop Estimates and Seasonal Notes.

In the seasonal crop report issued by the Victorian Department of Agriculture, the following is stated:—

Canning varieties of Peaches are carrying a better crop than estimated earlier in the season, and as the price to be given by the canneries is very satisfactory there is every promise that growers will harvest a profitable crop.

The early dessert Peaches in the Northern Irrigation district are uniformly light. Pears are continuing to thin out, and so also are Rome Beauty Apples; this variety set a fair crop in many orchards, but like all the pome fruits there has been a heavy drop due chiefly to imperfect pollination.

Owing to the irregular setting of fruit in different districts and even in orchards in the same locality, it has rendered the work of obtaining a reliable estimate of the crop most difficult.

It is estimated that the production of the principal varieties will be as follows:—Apples, 875,000 bushels; Pears, 750,000 bushels; Peaches, 500,000 bushels; Apricots, 369,000 bushels; Plums and Prunes, 86,000 bushels; and berry fruits, 640 tons. Of the Pear crop there will probably be a normal crop of the canning variety, Williams' Bon Chretien (Bartlett).

Citrus.

The prevalence of fungus diseases during the present season has indicated the necessity for growers to apply a Bordeaux spray during the autumn and to systematically inspect individual trees and remove diseased and dead wood from same. Septoria and anthracnose, together with black pit, a bacterial disease, are becoming more prevalent, and growers who know or suspect these diseases in their groves should endeavor to control them as early as possible. Trees which suffered as a result of the wet winter should receive particular attention because these fungus diseases appear to attack the debilitated trees first.

A good application of a complete manure and attention to irrigation and cultivation will materially assist in strengthening the trees to withstand the attacks of these fungi.

DEATH OF MR. CHAS. M. GRIFFETH.

Prominent Fruitgrower and Nurseryman.

WIDESPREAD REGRET has been expressed at the untimely death of Mr. Charles Melbourne Griffeth, managing director of the Two Bays Nurseries and Orchard Company Pty. Ltd., President of the Mornington Shire, and President of the Victorian Fruit Marketing Association.

Death was due to an accident, the cranking of his car while it was in first gear. The car moved forward, pinning the unfortunate man, then dragging him forward and crushing him. Death, it is thought, was practically instantaneous.

The late Mr. Griffeth was one of the most respected men in the fruit industry. He had intensive training as a nurseryman and fruitgrower. He was the son of the late Mr. George Griffeth, nurseryman and fruitgrower, also of respected memory.

Affectionately known as "Charlie," the late Mr. Griffeth had many friends throughout all Australia: the car which caused his death had carried him many thousands of miles among orchards and gardens. He was interested in all forward movements for civic improvement and for the betterment of the fruit industry.

The Two Bays Nurseries and Orchard Company Pty. Ltd., of which the late Mr. Griffeth was managing director, is a big enterprise, the orchards and nurseries covering several hundred acres, complete with cool stores and railway siding—one of the largest, if not the largest, orchard in Australia.

When the Victorian Fruit Marketing Association was launched, Mr. Griffeth soon became convinced of its value, and he threw himself wholeheartedly into its development. He personally canvassed growers and was instrumental in securing many new members. Subsequently he was unanimously elected President.

Attending the Australian Conference of Fruitgrowers at Hobart in May, 1930, as a Victorian delegate, the late Mr. Griffeth represented his State with conspicuous ability: he then saw the value of an Australian organisation to deal with Apple and Pear export with the result that he assisted materially in creating the present Australian Apple and Pear Export Council.

All will miss the tall figure and cheery smile of the late Charlie Griffeth, who was only 44 years of age. He was popular everywhere. A large number of friends gathered at the Mt. Martha cemetery, where the remains were laid at rest on January 1. He leaves a widow and two sons. Mr. C. M. Griffeth thus predeceases his uncle—Charles Griffeth—who with his late brother, George, founded the Two Bays Nurseries. The elder Charles Griffeth is now living in his native America.

Somerville.—At the annual meeting of the Somerville Fruitgrowers' Association the balance-sheet disclosed receipts £502/9/11 and expenditure £499/7/11. Office-bearers were elected as follows:—President, Mr. T. W. Brunning; Vice-Presidents, Dr. J. McTeague, Messrs. A. Firth and T. G. Tyler; Secretary, Mr. T. J. Pearce; Treasurer, Mr. W. Cox.

Mr. J. W. Caldwell was elected a life member.

STATIONARY SPRAY PLANTS.

Spraying by means of central stationary spray plants is now in common practice in the orchard sections of the State of Washington, U.S.A. Much spraying, however, is

done with the use of the ordinary tank sprayers, and this will always be the case in orchards which do not lend themselves to the stationary spray plant system.

Diseases in Walnuts.—"G. McG.," Scottsdale, Tasmania, writes:—I have about a score of large Walnut trees, some 35 years old, which used to bear a good crop of marketable nuts, but of recent years, while still setting fruit freely, quite 90 per cent. of the nuts are affected by a black spot, which eats through the skin when the nut is green, and destroys the kernels. I understand this is a bacterial disease, not a fungus, and certainly spraying with fungicides has proved of no avail.

Is there any proved effective method of soil or root treatment to check this disease?

I might mention that this row of Walnut trees is planted about 30 feet from a windbreak of large Pinus insignis, the roots of which are now well under the Walnuts.

Answer (by J. M. Ward, Superintendent of Horticulture, Victoria).—The disease referred to in your correspondent's letter is probably Walnut blight, and although no thoroughly efficient control has been devised, it has been found possible in America to minimise the disease considerably by means of orchard sanitation and spraying.

The infection spreads upwards from the soil surface, and it is most important to gather and destroy all leaves and debris which may underlie the trees, and to thin out the lower branches of the tree so that it does not approach too closely to the ground surface. By careful attention to these operations the risk of infection may be largely minimised.

A spraying with weak Bordeaux mixture, 8-4-50, when the catkins are about to shed their pollen, and if the disease is particularly troublesome a further spraying two weeks later, are recommended.

As I am personally acquainted with the Walnut trees in question, I am afraid he will find it difficult to spray such large trees effectively.

Answer (by P. H. Thomas, Chief Horticulturist, Tas. Dept. of Agriculture).—Tasmanian Walnuts are affected by a number of diseases, both of a bacterial and fungus species.

I would suggest that your contributor forward specimens of affected nuts to the Department of Agriculture for examination. If these were supplied, or an officer visited and examined the trees when in the district, it would be more satisfactory than a number of suggestions as to what may be causing the trouble.

VICTORIAN FRUIT COUNCIL.

At a meeting of the Victorian Fruit Council held at Melbourne on December 4, it was decided to appoint a sub-committee to draw up a unified programme for research in order to secure the membership of Associations not yet affiliated.

Fruit Propaganda Campaign.—Highly satisfactory reports were received regarding the propaganda being conducted by Mr. J. F. Gibson to increase the consumption of fruit.

Correspondence was received from the Victorian Railways, advising that fresh fruit would be carried by the N.S.W. Railways over the interstate system under certain conditions in 8-ton and 18-ton lots at the "M" class rate, i.e., at the rate applying to 25 tons.

STEPS FOR ORCHARDS.

Useful for Picking and Pruning.

THE ordinary house steps for picking purposes are often very awkward, and at times dangerous on uneven ground. Where a lot of picking has to be done, then a much more useful type of steps would be one such as here sketched from a home-made set. These are also exceedingly useful for pruning work.

If the total height is about 6 ft. 9 in., then the equilateral base wants at least a 3 ft. spread for the steps to be steady.

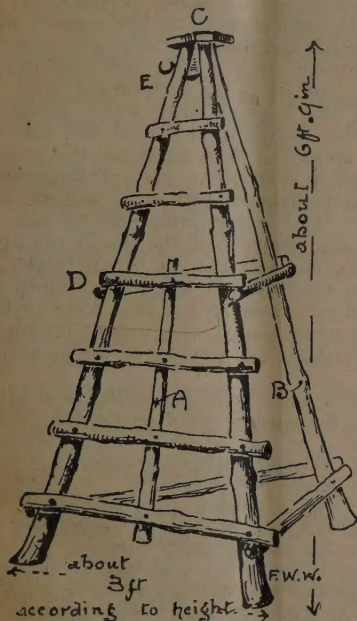
If you allow the back leg "B" to be about 1½ inches longer than the two front ones, it will allow you on sloping or uneven ground, to stand them with a safe tilt.

Naturally, the more the spread at the base, the better and safer. This is particularly so when we are working against time.

On account of the length of the lower rungs, that there is a risk of them snapping when one's full weight suddenly comes down on to it (in the centre), so a piece of wood marked "A," will relieve that strain and give security.

The small shelf on the top—"C"—is very handy to hold a basket, or pruning tools, and the hook at "E" is convenient for hanging a basket when picking fruit.

Another very useful type of steps is made by having them 2 inches higher than the three pieces of wood at "D" and on top of the three legs form a platform on which you can stand.



Hey, Bill, did you hear that the Salvation Army had taken over the Tasmanian railways?

Y' don't say! What for?

'Cause they shake the devil out of the passengers.

STORAGE OF PASSION FRUIT.

Experiments by Council for Scientific and Industrial Research.

PASSIONFRUIT of excellent quality is grown in every State of Australia, with the exception of Tasmania. Moreover, if it were possible to export the fruit on a commercial scale, there is little doubt that the production could be greatly increased.

During the current season, some preliminary experiments designed to study the conditions of treatment and cold storage necessary for successful transport overseas were accordingly commenced by the Council's Section of Food Preservation.

Preliminary inquiries showed that fungal attack and withering of the fruit were likely to be the chief causes of wastage during storage. Since the methods of washing citrus fruits with solutions of sodium bicarbonate and coating them with a layer of paraffin wax have been shown to reduce the wastage during storage, it was decided to apply these methods to Passionfruit. The effects of different wrapping materials were also tried. The fruit treated in these various ways was then stored in space kindly made available by the Victorian Department of Agriculture at its Victoria Dock Cool Stores.

It was impossible to begin the investigations until late in Victorian season, but sufficient data, relating chiefly to the efficiency of the wrapping materials and to the efficacy of the washing and spraying treatment, have been obtained to guide future experiments.—"Journal of the Council for Scientific and Industrial Research."

Armillaria on Peach Trees.—A reader at Stanthorpe, Queensland, writes as follows:—

"I would be pleased if you would open up a discussion in the 'Fruit World' or give the latest treatment for prevention of armillaria of the Peach—that is, root rot."

Mr. J. M. Ward, Superintendent of Horticulture, Victoria, gives the following hints:—

When fruit trees are attacked by *Armillaria mellea*, the soil should be removed from around the main roots and all traces of the fungus should be cleared away. This may necessitate the removal of diseased bark and wood. The wounds should be painted over with Bordeaux paste, and a dressing of about 2 lbs. of iron sulphate should be applied to the roots and surrounding soil. The crystals can be applied dry and worked in to the soil, or given in a dissolved form.

CITRUS IN CALIFORNIA.

Methods of pest control in California are described by H. C. Pannifex & Co., Melbourne, agents for the California Spray Chemical Corporation, as follows:—Area dusted (1929), 12,000 acres; (1930), 28,000 acres. Area fumigated, in acres—(1928), 63,000; (1929), 58,000; (1930), 66,000; area sprayed, in acres (1928), 60,000; (1929), 80,000; (1930), 94,000.

NOT THE ANGEL'S MESSAGE.

Mother: "Who ever taught you to use that dreadful word?"

Tommy: "Santa Claus, mamma."

Mother: "Santa Claus?"

Tommy: "Yes, mamma, when he fell over a chair in my bedroom on Christmas Eve."

Tasmania — The Isle of Enchantment.

Appleland is a Very Beautiful Place ∴ Apple Crop of Nearly 4,000,000 Cases Estimated.

(By Our Travelling Correspondent.)

THE DELIGHTFUL SCENERY of Tasmania is pleasantly described in an article just to hand from our travelling correspondent.

The journey from Launceston to Hobart—130 miles by rail is described appreciatively. . . . "Nearly every scene in Tasmania terminates in a mountain for a background, and their towering forms are a pleasing feature of the journey to the southern capital. . . . Hobart itself is delightfully situated at the foot of Mt. Wellington, which rises to a height of 4,166 feet above one of the finest harbors in the world. Tugs are never used, and the largest vessels afloat are able to berth at the piers in this broad estuary of the Derwent. A succession of bays and headlands add to the natural beauty of the harbor, while the towering dome of Mount Wellington puts the finishing touch to a picture of nature's own making not seen in any other part of the Commonwealth. . . . There is something about Tasmania that gets into the blood. The bracing air makes even the most casual visitor feel the ecstasy of living."

Then follows a description of Mt. Wellington, Port Arthur, National Park, and New Norfolk,—“in its glorious rural beauty, a little bit of old England in a Tasmanian setting.”

The subsequent articles will deal with the Tasmanian fruit industry, orchard districts, individual orchards, and the cultural methods in vogue among growers.

THE HUON DISTRICT.

The trip by car from Hobart to the Apple orchards of the Huon is decidedly attractive. The road winds through the Wellington Range, with views of the ocean constantly appearing at almost every turn of the road. Splendid views of the South Arm and other seascapes are obtained, and the mountain scenery make the journey of 24 miles a pleasant one.

Just before entering Huonville, one encounters the huge packing shed erected by Mr. W. J. Bailey. This building, which is nearing completion, will have a concrete floor laid down and when not in use for packing, will be used as an indoor tennis court.

It is a tonic to travel through the country that lies on either side of the Huon River. There is no depression or talk of depression here. Every orchardist is preparing for a bumper harvest, and the only thing likely to prevent a record crop for 1932, is the visitation of black spot. There is evidence in a few of the orchards where spraying has been neglected, that black spot has made its appearance, but in the vast majority of instances, little or no disease is apparent.

Starting at Huonville, the writer passed through the most prolific Apple orchards of the island, orchards that have trees that are in some instances 70 years old, and are still good producers.

Sturmer Tree With 50 Bushels.

One tree seen at the orchard of Mr. Tas. Thompson, at Geeveston, constantly produces big crops in the “on” seasons, and this year shows fully 50 bushels. It is a Sturmer-Pippin, a variety that is widely grown in the Huon districts.

The trip through the Apple country is one of the sights of Southern Tasmania. The Huon River wends its

way through miles of orchards planted on the slopes of the hills that rise from the river banks. These orchards are models of careful cultivation, and their owners have little to learn in matters relating to the production of the fruit that has made Tasmania famous. Set in glorious surroundings, the orchards attract

thousands of visitors in blossom time, and again during the Christmas holidays and later when the picking season is in full swing. Huonville is the starting point from which to inspect the orchards, and the Picnic Hotel at this thriving town is usually crowded with visitors. From here may be seen the “Sleeping Beauty,” a mountain that resembles a woman's face turned upwards to the heavens. It is a remarkably accurate outline, and the visitor instinctively looks in its direction when standing on vantage points adjacent to the Wellington Range.

Hardwood Case Timber Industry.

An industry that has been started at Huonville recently, is that of case making for packing Apples. The timber (hardwood) grows in unlimited quantities in the immediate vicinity, and success should be assured. Growers are supporting the venture, and it would be safe to say that 75 per cent. of the Huon growers are using the hardwood case. The timber used at the Stephens Fruit Case Ltd. works at Huonville is bought from the mills already cut in five feet lengths and is placed into a drying kiln where it remains for 20 hours. The drying kiln, which is 52 feet long, will hold ten trucks of timber at one time. The timber is steam heated to 400 degrees and nearly all the moisture taken out of it. Special planing machines smooth the timber and a Docker saw cuts 15 lengths of timber in one cut into sizes suitable for cases.

The finished case is produced at a cost of 9½d., and is a superior looking article to any other box used for fruit. The wood is dressed on both sides and the edges of each piece of wood is rounded to prevent bruising of fruit. The works are turning out both dump and standard cases.

Blackberries and weeds growing near the mill have been killed by the sap drawn from the timber during the seasoning process, and this has set people thinking of uses that might be made of this by-product, which resembles black ink, and may make an excellent stain, or be used as a weed killer when diluted with water. The mill is employing ten hands, and is working at top pressure to cope with orders.

Franklin, five miles from Huonville, is a bright little town that has the appearance of an English village. This is the centre of a vast Apple producing district. The growers here are anticipating big crops, and the district is a very prosperous one generally.

The stationary spray system

is being adopted in the Huon, and orchardists who have installed it are very enthusiastic. Messrs. Robert Nettlefold Pty. Ltd. installed the first one at Franklin three years ago, and the idea has caught on, for the firm has been kept busy supplying them. The advantage of such a system in the Huon is made manifest, where the spring rains are frequent and heavy. The extra cost of the system is far outweighed by the saving of labor, and the fact that the orchardist is enabled to spray immediately after the rain ceases, no matter how heavy it may have been.

Mr. E. C. Freeman, of Franklin, who was using the stationary spray system on the occasion of our visit, was very keen about it, and is a firm believer in plenty of spraying. Mr. Freeman has 30 acres, 25 of which are in bearing, and are expected to produce 15,000 bushels this season. The chief varieties grown and their expected yields are:—Sturmers (5,000 bushels), Democrats (3,000), Scarlets (1,850), Crabs (1,000), Cleos. (500), Australian Beauty (500), Jonathans (350), Tasman's Pride (200), Granny Smith (200), Croftons (150), Hoover (150), Aromatics (100).

The orchards of

Geeveston and Castle Forbes Bay

will produce wonderful crops this year, all going well, for the trees are bearing at full capacity and records are expected to be broken in cases of individual trees. Messrs. R. & H. Thiessen, of Geeveston, have one small orchard of 3½ acres that will produce 5,000 bushels of Yorks, Crabs, and Sturmers. The trees are 35 years old. On the other side of the road is another of their orchards where trees 60 and 70 years old are bearing crops that are as good as anything they have ever produced. Some of them will yield 34 bushels. At the orchard of Mr. W. Nicholls there is a Crab that will yield 43 bushels, and instances could be quoted of other wonderful yields per tree, but this is sufficient to indicate the prolific crops that can be obtained from trees in this area.

It was noted that many orchardists were spraying at Christmas time. This is the critical period and a spray of lime sulphur was being used as a precaution against spot. Although there were no indications of rain at the time, they were not taking any chances.

The Castle Forbes Bay district, of which Mr. Ben Watson is the outstanding orchardist, is reputed to be just as prolific in bearing as Geeveston. Time, however, on this occasion did not permit me to inspect the district, and it will be dealt with in a special article when I next visit Castle Forbes Bay in the near future.

Shipwright's Points, besides producing Apples, is noted for its annual regatta held on New Year's Day. At Geeveston close by, an industry that means much to the district has been started. This is the

paper pulp works

that has already turned out samples of paper suitable for many purposes. The progress of this industry is being watched with interest, particularly by Mr. Sol. Eaves, who has just built an up-to-date hotel at Kermantie, opposite the works. The hotel is a commodious brick structure containing 25 rooms in which Tasmanian hardwood is extensively used. It was built at a cost of £9,000.

On the other bank of the Huon, from Huonville to Cygnet, a distance of about 12 miles, the landscape is dotted with orchards that are yielding big crops, and conditions are much the same as that which obtain on the opposite side. The show place of the Huon district on this side is that of Mr. A. W. Hammond, at Lower Wattle Grove, whose attractive flower garden, rising from the road in a gentle slope to the house, has a wonderful variety of blooms that make a great splash of color against the background of wooded hills.

Mr. Hammond has 25 acres of Apples, and the orchard contains over twenty varieties. Among them are Granny Smiths. It was from here that the orchardists of the Huon obtained their stocks of this popular Apple. Mr. Hammond is confident that the Apple crop for 1932 will be a record, and there are many who agree with him.

Apple Production Around 4,000,000 Bushels.

The total production of the island is computed to be 3,500,000 bushels in a normal year, and the estimate made by the Agricultural Department for this year is 3,750,000

bushels. However, there is every reason to believe that this estimate will fall short of the actual result, for local experts put the total at 4,000,000 bushels. Many young trees are coming into bearing this season, and they will far outnumber any trees that have been cut out.

The average Tasmanian orchard does not reach the normal bearing stage until its ninth year, but this does not mean that it does not bear fruit before that time. Many of these young orchards will be yielding fair quantities of fruit this year.

A number of the orchards visited were growing Pears, but no purely Pear orchards were seen. During the past few years there has been an increased production of Pears, Apricots, and small fruits, and growers are looking to Australian markets this year to absorb their surplus crops. The chief Apple varieties grown are Sturmer, Jonathan, Cleopatra, French Crab, Dunn's, Democrats, Crofton, Delicious, Granny Smith, Tasman's Pride and Alfriston. The latter variety had a set back because of some prejudice on the part of shippers during the last few years, but this season there has been a big demand for it, and buyers are everywhere booking up sales.

Tasmania.

Bagdad.

FRUIT CROP PROSPECTS in the Bagdad district are given in the following interesting notes from Mr. S. J. Bisdee, of "Heston," Bagdad, Tas., on November 24:—The Apple crop generally, appears to be quite good—with one exception, for Scarlets are reported patchy on all sides. On the other hand, Cleos. are very heavy. It is quite evident that there is a sufficiently heavy setting to call for a rigorous thinning, if we wish to see good quality and size.

The Pear crop is fairly light—particularly Winter Coles. Pears, however, form a very small proportion of the crop in the district.

Apricots are everywhere very heavy. In my own orchard, the Apple setting is good to heavy, right through, and after thinning there will be 100 per cent. crop.

Our Winter Cole Pears are about an 80 per cent. crop—probably due to the terrific thinning of last year's heavy setting.

Importance of Thinning.

After my experience of thinning, I am more than ever convinced that growers can do a great deal towards crop regulation by this means, which will also yield excellent quality in the remaining fruits.

It takes some little while before one realises just how far one can go in this practice, and it is safe to say that when first attempted, one does not cut nearly hard enough.

In dealing with Winter Cole Pears, I find it best to space each fruit fully six inches apart where the setting is heavy. It used to be considered that a 2-inch Cole was a good marketable dessert Pear, but I defy anyone to sell that size to advantage in these times. Nowadays the 2½ in. or 2¾ in. fruits of this variety yield by far the greater profit.

The season, so far, has been exceptionally wet—an abnormally wet winter, followed by a dry and very windy September, with heavy and frequent rains through October and November.

It looks as though growers will want to bestir themselves to keep black spot in check. The majority of growers have this year made a special effort to control the mildew, which is probably the worst disease we have to contend with, if left to its own devices. However, with iron sulphide and Atomic sulphur sprays available, it should have no terrors, and is easily controlled.

WESTERN AUSTRALIA.

Annual Meeting of W.A. Fruitgrowers' Association. ∴ Important Matters Discussed

THE annual meeting of the W.A. Fruitgrowers' Association was held at Manjimup on December 4 and 5, 1931, Mr. J. McN. Martin presiding.

Mr. T. G. Sounness gave a report on the Conference held in Melbourne in December, 1930, when it was decided to form an Apple and Pear Export Council, after which Messrs. Wilmott, Simper and Booth gave reports on the first Conference of the Apple and Pear Export Council, which was held in Melbourne during August, 1931.

There was a discussion on the question of high port charges in Australian ports which were reflected in shipping freights.

Resolutions were carried urging a general reduction in the price of fertilisers. The Government was asked to proceed with the Manjimup-Mount Barker railway, also to reclaim a sufficient area inside the Albany Harbor for the erection of superphosphate works.

With regard to shipping, it was resolved that in the interests of growers adjacent to outports, who at times have to ship fruit through Fremantle, the Government be urged to reconsider the abolition of the through bill of lading concession. Conference protested against the additional charge of 2d. per case plus handling charges levied at Fremantle when fruit is transferred from one shed to another. The Government was asked to provide an inspector at loading stations to inspect fruit for export before being trucked.

The deed of trust covering the proposed levy on export fruit was adopted. Messrs. J. McN. Martin and H. Lake were appointed trustees on behalf of the W.A. Fruitgrowers' Association: Mr. A. H. Dickson to represent the shippers. The W.A. Fruit Organisation Committee was asked to act as the Refrigeration and Transport Committee in conjunction with the Apple and Pear Export Council.

Conference urged the necessity for precooling facilities at Fremantle: a protest was entered against the imposition of sales tax and the high tariff on spraying material and orchard requisites. The Executive was asked to endeavor to have the sales tax on imported fruit cases and material abolished.

The Government was urged to amend the Plant Diseases Act to deal with neglected orchards: to appoint an entomologist as an observer in one of the larger orchard districts during the blossoming period to note the effects of different insect pests: to experiment in the disinfecting soils for preventing black spot in Pears: to exploit the lime deposit at Karridale: to prohibit rubbish and immature fruit from being sold in metropolitan markets, and to see that notices were placed in trains, ships and on wharves, pointing out that no pip fruit is allowed into Western Australia under heavy penalty.

A resolution was carried in favor of export fruit being acknowledged by agents. The executive was asked to enquire fully into the question of the increase of freights on fruit and cases and to take any necessary action to have them reduced.

Regarding fruit trees, Conference objected to the word "Stayman" under the name to be used in uniform nomenclature, and that "Winesap" should be used so as to be in sympathy with the American Winesap. Nurserymen should give a guarantee that trees were true to name and variety.

With regard to the proposed delegation to England, Mr. J. B. Mills (Victoria) was endorsed to represent the shippers, Mr. G. W. Wickens as the expert; Mr. T. Price, if available, to represent the growers.

A vote of appreciation was expressed to Mr. Brearley for the work done in stamping out black spot in his orchard.

Election of Office-bearers.

The following office-bearers were elected:—President, J. McN. Martin; Vice-President, H. Lake.

Votes of thanks were carried to the Secretary, Mr. A. T. Booth; to Mr. Sutton and his departmental officers, to the W.A. Fruit Shippers' Committee, to the Executive of the W.A. Fruitgrowers' Association, and to the Manjimup Fruitgrowers' Association.

It was decided to hold the next Conference at Albany, and that the Association be incorporated.

Mr. G. W. Wickens, Superintendent of Horticulture, Western Australia, advises as follows under date December 18:—

The outstanding feature in connection with the Apple crop in Western Australia, is the very heavy yield in the Southern district—Mount Barker to Albany—where the crop is greater than in any previous year. In the South-West—Bunbury to Pemberton, the crop is much lighter, mainly owing to last season's heavy yield, many trees taking the usual off-season rest, and, in addition, some loss with late flowering varieties was caused by thrips.

Pears are heavier than last season, but whereas last season's production included a major proportion of Bartlett's (Williams) that variety is much lighter, and export varieties, particularly Josephine and Winter Nelis are heavier.

Stone fruits were on the light side last season, and owing to frosts in blooming and setting time, are on the whole, still lighter this season.

My estimate for season, 1931-32, compared with last season's returns are as follow:—

	Production, 1930-31.	Estimate, 1931-32.
	Cases.	Cases.
Apples	749,449	760,000
Pears	80,684	90,000
Peaches	50,223	50,000
Nectarines	11,469	11,000
Apricots	43,840	40,000
Plums	57,956	45,000

Bridgetown (30/11/31).—The coming season's crop looks to be a dud as far as this district is concerned.

A bad growing season, followed by thrips in blossoming time, has settled our chances of anything like a crop in the Bridgetown district: Pears are about 50 per cent., Plums and Peaches very light; Apples, all varieties, under 50 per cent.

Mt. Barker and Kalgan River appear to be going to have an A1 crop; they deserve it as they failed last year.

Apples in cold store are rapidly diminishing, and should be cleared out by the end of the year; prices fair, but buyers not very numerous.—F. E. S. Willmott.

South Australian Citrus Marketing Act.

Passed by Both Houses and Poll to be taken on February 5.

THE CITRUS MARKETING ACT has passed both Houses of the Legislature in South Australia, and will become law if 60 per cent. of the registered growers vote in favor. For the purpose of the Act the State is divided into three districts, each of which will vote separately. The districts are as follows:—

(1) The Murray district, including the electoral areas of Albert and Victoria.

(2) Southern District.—The electoral areas of Sturt, East Torrens, Murray and Alexandra.

(3) The Central district comprising the whole of the State not comprised in the Murray and Southern districts.

Part (1) of the Act gives definitions of terms.

Part (2) deals with the constitution of the Board.

A Board of six members is to be constituted, five representing the growers, and one appointed by the Governor.

The member appointed by the Governor shall be the Chairman, and shall have a casting vote as well as a deliberative vote. Two members to be appointed each from the Murray and Southern districts, and one from the Central district.

A roll of growers entitled to vote has been prepared. The Board is to be a body corporate by the name of the Citrus Marketing Board of South Australia, with power to sue and be sued under its corporate name.

Part (3) deals with the powers of the Board. Full powers are vested in the Board to do all things necessary in connection with the acquisition and marketing of citrus fruits.

The Board can borrow money on any of its assets (including fruit delivered to the Board), make all necessary contracts, arrange for the export of citrus from South Australia also for the transportation, cartage and handling of citrus fruit. A levy of 1d. per bushel is provided with an additional levy of 1d. per bushel to create an export compensation fund to repay growers who, by reason of export have suffered loss.

The Board has power in its absolute discretion by general or particular notice to direct where and in what quantities citrus fruits are to be marketed, including power to fix quantities to be exported; to direct that all the things included in the marketing of citrus shall be done only by the Board; all citrus fruit in the possession of any person whomsoever shall be dealt with only under the instructions of the Board, and shall be delivered only to such persons as the Board may authorise.

Compulsory Acquisition of Citrus.

Section (25) states that all citrus fruits shall be vested from the growers thereof and become absolutely vested in and be the property of the Board, and may require growers to deliver the fruit to the Board, such citrus fruit to be the absolute property of the Board, free from all mortgages, charges, etc.

Section (30) reads—It shall be the duty of the Board to market to the best advantage all supplies of citrus fruit of which it has become the owner pursuant to section (25). Contracts, whether inside or outside the State other than those made by the Board are declared null and void. The Board, when acting in good faith and without negligence, is freed from liability.

Part (4) deals with the powers conferred under regulations. These include the regulating of the removal of citrus fruits from packing sheds, the purchase, acquisition, sale or marketing of citrus fruits, the amount of com-

mission to be charged for the expenses of marketing; the creating of offences and prescribing of evidentiary provisions.

A fine of £50 is to be imposed for the contravention of prescribed regulations and £200 where an offence is created by the Act.

60 per cent. Vote Necessary.

Section 39 (6) states that if at the poll two thirds (excluding informal votes) of the registered growers vote in favor, the Governor may by proclamation declare that the provisions of the Act shall apply to the district concerned.

The Hon. S. R. Whitford, Minister for Agriculture, describing the Act, stated that there would be two representatives of the Murray and the Southern districts, and one representative of the Central district.

The Board, when appointed, would have powers generally similar to the powers of the Dried Fruits Board. It would have power to direct where, and in what quantities, or what proportions, citrus fruits were to be marketed, and it would also have power to exempt from its directions growers of small quantities of citrus fruits, sales direct to local consumers or retail vendors and other sales or purchases where the conditions justified it.

In the Act "Citrus Fruits" means Citrons, Lemons, Limes, Mandarins, Oranges, Sevilles, and Tangerines, and a "Grower" means any person occupying land upon which at least 50 citrus fruit trees are grown.

The Act does not come into force until after a poll of citrus growers is held to ascertain whether they are in favor of the Act or not. Voting will be by post, and it is provided that if two-thirds of the formal votes in any district are in favor, the Governor may then, by Proclamation, bring the Act into force in respect of any such district. If the voting in any district shows less than two-thirds of the formal votes in favor of the Act no such Proclamation will issue in respect to that district.

A roll of growers is being prepared. Applications closed on December 31.

The Regulations provide for objections being lodged to the inclusion of any person's name on the roll. Appeals must be determined by the Minister of Agriculture on or before January 24, 1932, and as soon as possible thereafter the Secretary to the Minister is required to forward by post to every person on the roll a ballot paper.

Ballot papers must be received by the Minister of Agriculture on or before February 5, 1932.

SOUTH AUSTRALIA.

Crop Report, Nuriootpa.

Apricots.—Very light.

Peaches.—Light.

Plums and Prunes light.

Pears.—Good.

Apples.—Medium to fair (patchy).

Owing to wintry conditions during the flowering period, followed by late frosts, the crop of stone fruit is the worst since 1914—the drought year. Thrips are responsible for a very uneven setting of Apples, some orchards having a good show, whilst in others the crop is poor.

During the last few years, growers of canning Pears have been obliged to sacrifice a large proportion of their

crop for want of a market, the factories operating on this fruit to a very limited extent.

The Barossa Fruitgrowers' Association has now taken the matter up, and has arranged with an Adelaide canner to process about 140 tons of Pears on behalf of the growers. The fruit will be exported probably to Canada. If the enterprise is successful it will be repeated next year on a larger scale, thus rendering growers more independent of local buyers, and also affording a practical demonstration of the benefit of co-operation.—A. B. Robin, Nuriootpa, S.A. 26/11/31.

SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

A meeting of Executive Committee of the S.A.F.M.A. was held at Adelaide on November 27, 1931.

There were present Mr. H. J. Bishop (Chairman), Messrs. M. G. Basey, R. H. Charlick, E. W. Dearman, A. Filsell, J. S. Hammat, R. O. Knappstein, F. B. James, G. Mack, R. B. Pritchard, G. Quinn, J. B. Randell, G. W. Selth, P. R. B. Searcy, M. Vickers, R. Willsmore, and the Secretary. Apologies from Messrs. H. N. Wicks, D. W. Hannaford.

Careful Handling.—It was decided to request the Minister of Agriculture to receive a deputation consisting of Messrs. Bishop, Randell, Selth, Searcy, and Wicks, to discuss the question of providing additional inspection on the wharves and in ship's hold during the shipping season to ensure satisfactory handling of fruit during loading.

Uniform Inspection.—It was resolved to arrange a meeting at the Blackwood Government Orchard, on Thursday, February 18, 1932, at 2 p.m., growers to bring samples of Apples, and Mr. Quinn to arrange for Government Inspectors to attend to enable a uniform classification in regard to grades, etc., to be decided on.

Commerce Act.—At the suggestion of Mr. Willsmore it was decided that a reprint of the requirements of the Commerce Act in regard to sizes, etc., of Apples, blemish, labelling and the like should be sent out to all members.

Mr. Carne's Visit.—Mr. Quinn advised that Mr. W. M. Carne (Plant Pathologist, Council for Scientific and Industrial Research), would be visiting South Australia in the near future, and he would advise the Committee when he had definite information with a view to arranging meetings.

Forecasting Crop.—It was resolved that the Chairman advise the Shipping Representatives' Association that the forecast for the crop for the coming season would now be 500,000 cases of Apples. Pears, January shipment 2,300 half cases, February 3,000 bushels, March-April 5,000 bushels.

Duty on Imported Bluestone.—Mr. Bishop referred to the increased duty on imported bluestone, and it was resolved that the matter be referred to the Research Subcommittee for consideration in regard to the results obtained from the imported and Australian article.

Fruit for Near East.—Letter received from Elder, Smith & Co., re importation of fruit to Malay, Java, etc., advising the reduction in exchange from 50 per cent. to 30 per cent. on portion of through freights on cargo for trans-shipment for Singapore.

Oversea Committee.—Secretary reported having received list of names from Messrs. G. Wills & Co. Ltd., Government Produce Department, and Paterson & Co. Ltd. The other shipper members undertook to supply list in time for the December meeting, and the matter was deferred for consideration at this meeting.

Port Mark on Cases.—Letter from Overseas Shipping Re-

presentatives' Association in regard to suggestion from Sydney that certain diagrams should be used on cases to indicate destination ports. The proposal was negatived as unworkable.

Research Sub-Committee.—Mr. J. B. Randell reported that the codlin moth control experiments were continuing satisfactorily, and it was hoped that very helpful information would be obtained.

At a meeting of the Executive Committee of the S.A.F.M.A., on December 18, it was decided to appoint Mr. H. G. Colombie as the Association's representative at the forthcoming meeting of the Executive of the Australian Apple and Pear Export Council to be held at Melbourne on January 6.

It was also decided to oppose the sending of the proposed delegation at the present time and to protest against the use of any of the advertising funds towards the expenses of the delegation.

Forecast of Crop.—In view of reports received as to damage done by the recent hailstorm, it was resolved to notify the Overseas Transport Association that the estimate for crop had now been reduced from 500,000 to approximately 400,000 cases of Apples.

Citrus Marketing Act, 1931.—Mr. J. S. Hammat explained the provisions of this Act, and the procedure to be adopted, and the matter was discussed at length, and it was resolved that this Association is opposed to any Government Control in connection with the marketing of fresh fruit and produce.

Bluestone.—Mr. H. J. Bishop reported that in all probability increased duty would be imposed on imported bluestone.

BERRI.

Field Day at Experimental Orchard.

There was a record attendance at the Annual Field Day at the Berri Experimental Orchard early in December. There was a large attendance of growers from Renmark, Berri, Barmera, Block E, and surrounding districts.

Much interest was displayed in the results of the various manurial and pruning tests. Appreciation was expressed for the excellent condition of this experimental orchard. Mr. Geo. Quinn, Chief Horticultural Instructor, gave an interesting address on grafting.

Mr. N. S. Fotheringham, manager of the orchard, accompanied the visitors on a tour of inspection, and made helpful explanatory comments.

Mr. F. R. Arndt (District Horticultural Instructor), Mr. F. Richards (Assistant Secretary of the S.A. Bureau of Agriculture), were also in attendance. The whole proceedings were exceedingly pleasant and helpful. A resolution was carried sympathising with Mr. H. S. Taylor in his illness and hoping for his early recovery.

Brogdex Patent in Australia.—We are advised that a patent application No. 215, filed January 15, 1931, has been accepted in Australia in the name of the Brogdex Company, for "apparatus for treating fresh fruit."

This advice was received from Messrs. Phillips Ormonde Le Plastrier and Kelson, Patent Attorneys, Melbourne.

A DEAR FRIEND.

Sandy MacJones: "What do they mean by 'A Dear Friend,' Tammas?"

Tammas MacSmith: "I dinna ken, but the dearest friend I ever had was a man that was married three times. He cost me twa wreathes and three weddin' presents in sax years."

The Victorian Fruit Marketing Association.

THE THIRPS PROBLEM DISCUSSED.

The monthly meeting of the Executive of the Victorian Fruit Marketing Association, was held at the Board Room Commercial Travellers' Association, Melbourne, on Friday, December 18. There were present—Messrs. C. M. Griffith (President), J. W. Bailey, W. H. Carne, F. Cave, W. A. Webb, W. Hutchinson, G. W. Brown, F. R. Mellor, A. S. Harrison, H. G. Colombie, C. J. Parnham, J. M. Ward (Superintendent of Horticulture), and E. H. Wragg, Acting Secretary. Mr. Walker (Bayswater), was also present.

Apologies were received from Messrs. H. Ford (Harcourt), J. B. Mills, and the Secretary, R. E. Boardman (the latter owing to illness). An apology was also received from Mr. C. H. Jost (Quantong). In response to his request it was decided to grant him leave of absence until May next.

Thrips Research.—Letters were received from Messrs. H. Ford (Harcourt), and C. P. Nobelius (Warragul), in reply to questions sent out re thrips as follows:—

Replies to Questions re Thrips.

The following were the questions submitted:—(1) What kinds of fruit do you grow and what varieties? (2) Dates of blooming? (3) Date on which thrips were first noticed? (4) Varieties which have set a reasonable crop? (5) What arrangements for cross-pollination have these varieties which have a reasonable crop?

(6) What arrangements for cross-pollination have you for the varieties which have not set? (7) What shelter from wind have the varieties referred to in questions five and six? (8) What other factors do you consider were involved? (9) What are the arrangements for drainage in the orchard? (10) Please state any observations on this subject which you think will be of service.

A reply was received from Mr. C. P. Nobelius, Warragul, as follows:—

- 1 and 2.—Apples—Jons. (about October 1), Demo. (September 27), Yates (October 1), Granny Smith (October 4), Del. and Winesap (October 10), Romes and Londons (October 21).
3. A few thrips on October 4.
4. Jonathans and Yates have set a fair crop on the high ground. (My orchard has a good slope to the east, one corner to the south-east and flat.) On the low ground south-east corner nothing set at all.
5. Six rows Jonathan, one row Yates, in some cases pieces of Rokewood and Yates grafted in the Jonathan.
6. Same as 5.
7. Sheltered from strong westerly but not east winds.
8. I blame a frost and cold weather mostly.
9. Drainage.—Soil drains naturally, but flat all pipe drained.
10. I have particularly noticed that on the hill or high ground, wherever there are Jons. and Yates together they have set fair crops, but strange to say in some cases where there is a fair-sized limb of Yates and Rokewood grafted on to a big Jonathan, that although the branch of Yates has set heavy, some having up to 40 and 50 blooms, the Jonathan have set around the branch on the one side and are very light on the other, as if the blossoms would not pollinate more than three to four feet away.

I have some young Apples (five years old), Grannys and Democrat on the flat; the Democrat were the first to bloom and were out a full week before any sign of thrips, in fact I did not see any in them and they were good strong healthy blossoms, but not one set.

Also in the low ground I have some Yates which were a perfect picture as far as healthy blooms; they have Jonathan mixed in them, then a square of 70 Yates, with Jonathan on two sides. There were some thrips in these, but very few as they were in full bloom on October 7, when the thrips began to show up. Yet neither the Jonathan or Yates have more than from six Apples to about half a case a tree and they should carry eight to ten cases comfortably.

I have 400 Romes (4 rows Romes, 1 London, 4 Romes). These trees in 1930 heavy season averaged 9 cases, some giving 15 cases. This year they looked splendid. I sprayed them on October 8—Volek oil $1\frac{1}{2}$ galls, nicotine $\frac{1}{2}$ pint, bluestone (9) soda (12) to 80 galls; then on October 18, same spray only half strength of all but nicotine, which we put full strength again. Result—the buds came out brown. I thought the spray had burnt them, but neighbors' were just the same; they never seemed to come out properly and look like a fair crop set, but all fell off and now there are not three Apples to a tree. I also did two rows only with lime sulphur and nicotine, but there was no difference.

Half the orchard I did with bluestone and soda and half lime sulphur, 1 in 23 and $\frac{1}{2}$ pint nicotine on most of them.

We had a frost here about October 15. There is one orchard here which have a very fair (about three-quarter) crop of Jonathans and Yates. Although he has them all as close as four trees apart he put a tin of blossom in nearly every tree, and it looks as if it has paid him well as his neighbor next door has nothing.

A reply was also received from Mr. H. Ford, Secretary of the Harcourt branch of the Victorian Fruit Marketing Association, as follows:—

1. Varieties.—Dunns, Cleo. Rome Beauty, Jon., Five Crown, Schroder, Rymer, G. Smith, Stewart S., Del., E. Spitz, Stone Pip, Sturmer. (The first five are main varieties.)
2. After Winter Oil Sprays—blossoms October 15 to 17, with exception of late blooming varieties. Confirmed from growers' diaries.
3. Thrip first noticed in numbers on October 14. Flowers in cover crop (peas), and home gardens became badly infested from this date.
4. A meeting of 40 growers voted as having had crops in varieties as hereunder:—
Cleo. (5), Schroder (4), E. Spitz (10), Rymer (15), Jon. (7), G. Smith (2), Sturmer (4), Dunns —, R.B. —.
- 5 and 6.—Growers are conforming to best ideas.
7. Orchards sheltered from south winds have generally given fair prospects all round, otherwise question 4 and the answer thereto gives a very fair idea of varieties which have given best results.
8. Mr. E. Pritchard deduced the failure of fruit crop from an examination of district rainfall. The excessively wet winter was not conducive to healthy root systems, while the dry month of October was very favorable to thrip infestation.

Dec., 1930, 640 pts.; Jan., 1931, 30 pts.; Feb., 35 pts.; March, 312 pts.; April, 328 pts.; May, 385 pts.; June, 541 pts.; July, 260 pts.; August, 168 pts.; Sept., 269; Oct., 32 pts.; Nov., 382 pts. Total, 3,382 pts. Average rainfall, 2,300 pts.

- (a) Excessive hot winds on October 15, burnt petals and caused them to fall off.
- (b) Frost in low-lying orchards, thoroughly cleaned up the crop.

An interesting discussion took place regarding these matters, and it was decided on the motion of Mr. Colombie, seconded by Mr. Harrison, that both letters be printed in full in the Association's monthly report for distribution to members, typed copies to be prepared prior to report and forwarded to Mr. J. W. Evans, Entomologist, and Mr. J. M. Ward, Superintendent of Horticulture, both Messrs. Ford and Nobelius to be thanked for their reports and to be advised that copies were being forwarded to Mr. J. W. Evans and the Department of Agriculture.

A letter was received from the Department of Markets relative to thrips investigations, stating they had ascertained from the Fruit Industry Sugar Concession Committee that their powers did not provide for the granting of funds for purposes such as were desired and they regretted that the Association's application could not be approved.

A letter on similar lines was received from the Fruit Industry Sugar Concession Committee.

Mr. Brown reported in connection with this matter that he had had an interview with Dr. Rivett, of the Council for Scientific and Industrial Research. Dr. Rivett had indicated to him that a sum of about £1,200 was required by his Council to enable them to completely carry out the investigations which they had in hand.

A discussion took place regarding the possibility of obtaining contributions towards the amount required.

It was decided on the motion of Mr. Parnham, seconded by Mr. Colombie, that a letter be sent to the Australian Apple and Pear Export Council, drawing attention to the need for funds to carry on the thrips research work and urging that that Council arrange a deputation to the Minister in charge, pointing out the need for assistance in this matter.

Harcourt Branch.—Mr. Ford forwarded a complete report of the general meeting of the Harcourt branch of the V.F.M.A., held on December 11, 1931. At this meeting the following resolution was carried:—

"That the Executive of the V.F.M.A. be pledged whole-hearted support and congratulations of this meeting for their future efforts on our behalf, and their very great success since the inception of the V.F.M.A."

The Committee of the Harcourt branch of the V.F.M.A. for the ensuing year was elected as follows:—H. M. McLean (Chairman), J. H. Ely, C. A. Bertuch, K. Eagle, H. Ford (Secretary).

It was decided on the motion of Mr. Mellor, seconded by Mr. Colombie, to write congratulating Mr. Ford on the successful meeting held in Harcourt, and expressing appreciation for the motion of confidence in the V.F.M.A.

Relief for Orchardists.—Mr. Brown outlined the position of fruitgrowers, particularly in Victoria, owing to the indifferent seasons which had been experienced during the last five years. He suggested that it should be possible to give some relief to orchardists under the Unemployed Occupiers and Farmers' Relief Act 1931. This Act, with some modifications, could be adapted to the fruitgrowing industry. He also suggested that the Agricultural Advances Act could be amended to include fruitgrowers. What was required was some Central Organisation like the V.F.M.A., which could follow this matter through and assure the Minister they would determine that any advances made to fruitgrowers would be repaid as early as possible on a basis to be arranged.

Mr. Carne and Mr. Colombie also spoke on the matter. After further discussion a sub-committee consisting of the President, Messrs. Hutchinson, Harrison, Brown and Colombie, endeavor to arrange a private interview with the Hon. J. P. Jones, M.L.C., with a view to discussing preliminary details of a proposal as outlined by Mr. Brown.

New Members.—Applications for membership by Messrs. Wm. Main and C. Clay, Portland, were agreed to.

KEEPING QUALITIES OF APPLES.

We recently had the opportunity of inspecting in the Melbourne Wholesale Fruit Market a number of cases of fruit representing the final consignment of the 1931 Jonathan Apples from the Valley View Orchards of N. & I. Woolf, Pakenham Upper, Vic. These Jonathans were picked on February 1, 1931, and have been held in the cool store on the property since they were picked. The fruit, when sampled by our representative, was perfect in flavor and texture. A consignment of Yates Apples from the same orchard was also inspected. The Apples were all wrapped and firmly packed. These Apples were quite firm and even the greatest of pressure with the hands could not break the texture of the fruit. This was compared with another case of Apples from an orchard in the same district. The Apples taken from the other case could be broken up by pressure of the hands. Both consignments, which were in standard dump bushel cases, were weighed. The Yates Apples from the Valley View Orchard, including the case, weighed 54 lbs. The Apples from the other orchard weighed 42 lbs.; thus allowing for the fact that the Valley View fruit was packed in a slightly heavier case there was a difference in the weight of approximately 9 to 12 lbs.

The Yates Apples from the Valley View Orchard, which were sold by Woolf & Son at the Wholesale Fruit Market, realised 14/- to 15/- per case; the other Apples were practically unsaleable.

It is interesting to note that the cool store on the property of the Valley View Orchard, which has a capacity of 24,000 cases, is constructed almost wholly of concrete. The necessary refrigerating machinery is available, and the proprietors propose to increase the storage capacity of this store to 80,000 cases.

FRUIT COOL STORES.

Requests for Deferred Repayments.

A deputation from the Fruitgrowers' Cool Stores Association of Victoria, waited on the Acting Treasurer (Mr. Jones, M.L.C.), on December 15, requesting—

(1) A reduction of the interest rate in accordance with the interest reduction in Government securities under the Premiers' plan.

(2) That the Government defer the next three payments of interest and principal on loans to the cool stores under the Fruit Act.

Mr. Jones stated that as the Premier was ill he could not grant the request, but he would place their representations favorably before Mr. Hogan. He suggested that the cool stores should take into consideration the question of building up a reserve fund "for a rainy day."

Harcourt.—The Harcourt district was anticipating a reduction of over 500,000 cases of Apples this season. Owing to unseasonable conditions, frost and thrips, the estimate has now been reduced to 70,000 cases.

The Apple—Nature's Dentifrice.

Medical Expert's Opinion.

ALL FRESH FRUITS AND NUTS ARE VALUABLE.

(By Dr. Philip Welsh.)

“WHAT IS THE BEST THING to clean the teeth with?” is the question most often asked of a dentist. This is a more important question than we might at first think. First, because we know that a clean tooth will not decay. Therefore if we find the solution to this question, we find the solution in preventing decayed teeth. Second, the mouth is the doorway to the body. All our food, our drinking water and even the air we breathe, passes through the mouth, and when the mouth is not clean these life-giving elements are contaminated right in the mouth.

Time and again we have taken large groups of people—persons who were supposed to have been above average intelligence—who were impressed with the importance of a clean mouth, and really believed they had a clean mouth, who brushed their teeth every day, and often after each meal. We examined the mouths of these people, and what did we find? More than 90 per cent. had unclean mouths, stained teeth, decayed or rotting teeth, films around and in between their teeth, inflamed and bleeding gums. These statements are by no means exaggerated. In spite of all the miraculous tooth pastes, in spite of all the wonderful mouth washes, with the whole nation digging their teeth with most promising tooth-brushes, the people have not been able to keep their mouths clean. My experience, which stretches over a period of ten years' close observation in mouth hygiene, prompts me to make the broad statement that with the best toothbrush and any of the tooth paste or powders on the market, it is impossible for the patient to really clean his own mouth.

For three years I experimented on my mouth. I brushed my teeth for 15 minutes after each meal and 20 minutes before retiring. After each brushing I used dental floss between my teeth and then finished by using a mouth wash. I tried most of all the tooth pastes and powders on the market, every kind of toothbrush and the mouth washes that were supposed to be the best. At the end of the experiment my mouth was examined, and five new cavities were discovered. During those three years, although my teeth seemed clean, I could feel that my tongue seemed to lack a certain freshness I now enjoy. My breath was not sweet, particularly in the morning when I awakened. I knew I had not yet found the right way to keep my mouth clean. I decided that my search was in the wrong direction. It was not the natural, the biologic, the logical way. I went back to our animals to search for what they used to clean their mouths with, and found it was nothing more or less than the foods they ate; so I turned my investigation in that direction.

During the first few months I would live on one particular kind of food for several meals, after which I would test the result by applying a detecting solution to my teeth. It did not take me long to discover that the nearer a food was to its natural state the less it stained or adhered to the enamel. The more refined or processed the food, the more readily it stained and soiled the teeth.

I then turned towards raw and natural foods like Apples, Oranges, Lemons, Grapefruit, Pears, Bananas; raw vege-

tables, Lettuce, Celery, Cabbage, Carrots, Onions, Cucumbers, and the various nuts. I found that these natural foods did not form films over the teeth. The raw acid fruits, particularly the Apples and the Oranges, cleaned the teeth and actually made them sparkle.

Of all the foods the raw, ripe, unpeeled Apple is the best thing I know of with which to clean the teeth and entire mouth. The Apple works both physically and chemically. The Apple is tough, crisp and hard, and when the teeth are dug into it they are naturally cleansed and polished. The Apple encircles the tooth under a great pressure, and after cleaning all the surfaces of the teeth the beneficial effect comes to the gums, which are massaged as the fruit is forced over them in mastication. In chewing the hard and firm Apple with its tough peel the teeth are forced in to their sockets, which contain the blood vessels. The pressure exercises the teeth and stimulates the flow of blood through both teeth and gums. This action helps to bring fresh nourishment, which strengthens and hardens them.

But the real beneficial effects of our Apple and acid fruit are derived from their chemical action. When this fruit is taken into the mouth it immediately induces a copious flow of alkaline (opposite to acid) saliva. The mouth was made for receiving foods, not chemicals. We are all agreed upon the fact that alkaline saliva is the great antiseptic of the mouth. Instead of using chemicals, why not produce this alkaline condition the natural way, the Creator's way, the easiest and most pleasant way, by the use of acid fruits? An Apple a day keeps the doctor away; half a dozen a day keeps the dentist away.

I am convinced that raw fruits and raw vegetables are the best and only real food for man. Since I have realised the value of the natural foods, my teeth have not decayed. My breath is sweeter. My tongue has better color. My dental friends tell me I have one of the cleanest mouths they have seen, and patients who have not seen me for years tell me I look younger.—“Better Fruit.”

EXPORTS TO CANADA.

The Minister for Markets, Mr. Parker Moloney, in referring to the activity being displayed in the Canadian market, said that despite the great fall in world's commodity prices, the value of Australia's exports to Canada for the first quarter of this financial year was more than double that for the same period last year. In fact, it was more than half the total value of exports to Canada for the whole of last year.

The respective figures were £170,290 for the first quarter of last year, which had increased to £407,129 for the first quarter of this financial year. Of this large total, £132,000 represents the value of dried fruits exported to the Canadian market; £108,000 canned fruit (including Pineapples); and £131,000 sugar.

“It is very pleasing,” said the Minister, to know that ships which have left recently have been well laden. I sincerely hope that the present financial year will prove a record one for Australia in the Canadian market.”

The Importance of Research Work

An Orchardist Visits the Werribee Research Farm

(F. Thomas, M.A.)

THE RESEARCH FARM in September, with its long rows of experimental plots, is a delight to the eye of the farmer, but the orchardist, for a time has to struggle against sheer black envy. Now, envy is one of the seven deadly sins, but the Recording Angel may accept our excuse, that it is really a subtle compliment, a form of appreciation of the orderly work that is being carried out here for the benefit of the farmers of the State. We congratulate the farmer on his success in getting the scientist interested in his problems, and the Government to back them with money, but surely our problems are as intricate and our needs as great. We can claim a long and honorable ancestry. While the wheatgrower can look back to ancient Egypt, and the dairy-farmer to Noah, we can trace our descent direct from Father Adam.

When he lay dying he said:—

"My children, bring me fruits and bring me flowers.
We hastened and plucked flowers; Balsam boughs,
Late Roses, darkly flushed, or honey-pale,
And heavy clustered Grapes, and yellowing Gourds,
Plump Figs, and dew-moist Apples, and smooth Pears."

To-day we must search to find our Apples, and our Roses are foul with thrips. As the years rolled by, our enemies have increased, and we need expert advice more than ever.

Here is a Job for the State.

At Werribee we can see how well the State can do it. It is true that the study of the tree is more difficult and requires far more time than do cereals like wheat and oats. But that is only another reason why the work should be put in hand at once, and by trained men. It is impossible for the orchardist who has to earn his living to do experimental work of any value. Many of us have tried, and know how unsatisfactory are our results. We are dealing with a living thing in studying a fruit tree, and so many of the factors influencing its life are either unknown to us, or not recognisable by us. Weather conditions affect growth profoundly, and in our climate are so diverse that tests must be continued over a term of years before reliable conclusions can be drawn. Careful records must be kept; the work must be done at the right time, and can be done only by those who can give their whole time to it, and who have not to face the spectres of poverty and want. We must have a State Experimental Orchard.

"This Farm Costs £6,700 a Year,"

said Mr. Mullett, in his introductory address to the farmers at the annual field day at Werribee in Show Week, and with the burden of taxation pressing heavily upon us we want to know whether we are getting value for our money. A walk across the farm soon makes us realise that it is more blessed to give than to receive, especially when we soon get it back a hundred-fold. One of the special activities of the farm is the breeding of new varieties of wheat and oats. Free Gallipoli, which originated as a single plant selection in 1917, has now beaten Federation from its leading position. The wheats bred at Werribee cover 65 per cent. of the crops sown in Victoria, and as these varieties average from three to six bushels an acre more than Federation, the gain to the

wheatgrowers of Victoria, even when wheat is 2/6 a bushel, is over £500,000.

Every year we hear of new and improved varieties of wheat, but

Where are our new varieties of Apples?

What progress have we made in the last twenty years? We have added Granny Smith and Delicious to the list of our commercial varieties, but in the main we grow merely a selection of what our grandfathers planted fifty or sixty years ago. Patient and skilful workers have applied methods of continuous selection, and the laws of heredity worked out by Mendel, to potatoes, to sugar-beet, to maize and wheat, but what has been done for the Apple, and the Pear? The fruit crop of Australia is valued at approximately £14,000,000, and it is true that Governments realised its importance, and the dangers that menace it.

While manurial experiments are being repeated year after year at the Research Farm, the wheat farmer is not now very interested in them. He has the information he wanted. The grazier, however, is watching with pleasure the results of manuring the pasture, and the important work of separating and improving strains of grasses and clover at the Burnley Horticultural School. He is coming to realise that grass is the most important crop in the State, deserving and repaying the thought now being spent upon it. It is only when a grass crop is cut every three weeks with a lawn mower, and the clippings weighed and analysed, that we appreciate the amount and the quality of the food supplied. It is hard to believe that upwards of thirty tons per acre has been obtained in this way, and that the nutritive value of the clippings of the young shoots is equal to that of bran.

It was a pleasure to walk across the paddocks that were used to demonstrate the value of the practice of rotational grazing—where 60 cattle were kept on 40 acres of land. The grass was thick and soft and regular, as if it were one of the lawns we read about in accounts of old English homes, rolled and cut and tenderly cared for, by generations of gardeners for a thousand years. Yet it is done by the cattle themselves, who spend two and a half out of every twenty days on each five-acre field.

The Manurial Problems.

for the growth of beet, potatoes, maize and wheat are now practically solved, but the far more difficult problems confronting the orchardist have not been attempted. Why is this? Because no reliable answer can be given until we have an Experimental Orchard and Research Station, and nothing of the kind yet exists in Victoria. It is true that a piece of land has been set aside at Tatura, but not a tree has yet been planted, and for the orchardists of the south nothing has been done at all. Politicians tell us that no money is available, but even politicians know that all new wealth comes from the land. It is impossible to work up a prosperity boom in the city until the worker on the land is producing the basis of it. Money cannot be spent in a more reproductive way than on research. The Werribee Research Farm is a proof of it, and an example of what our scientists and the officers of the Agricultural Department can do when they are given the chance.

Through our organisations and our members of Parliament we must keep up the demand for research for the sake not only of ourselves, but of Australia.

Victorian Orchard Districts

MORNINGTON PENINSULA.

The Hastings District.

THE MORNINGTON PENINSULA, Southern Victoria, is eminently suitable for fruitgrowing. The districts embrace Baxter, Somerville, Tyabb, Hastings, Red Hill, Moorooduc and Mornington.

This article has particular reference to the Hastings district, in which there are approximately 700 acres under fruit.

Near the railway station the district appears flat and uninteresting, being close to the shores of Western Port Bay: but directly one gets among the orchard country a mile or two in a westerly direction towards Port Phillip Bay, nothing could be more pleasing than the undulating countryside intersected with well-tended orchards and farms.

The soil is variable, but largely of a heavy nature with a clayey subsoil: the soil, however, breaks up nicely under cultivation. At the time of our visit the subsoil was moist from the recent heavy rains. The long wet winter, however, revealed any weak spots in the drainage systems: quite a few Apricot trees died right out.

In a normal season the district production would be in the region of 80,000 cases. The export trade is considerable, much of the business being on the f.o.b. basis, as buyers are able to operate with confidence with the district fruit packing house and with the established growers. Several orchards hereabouts are of considerable size.

Mr. J. D. Carpenter has a beautifully kept orchard of 60 acres, particularly Apples, to which special reference was made in our last issue.

Nearby is the twenty-acre orchard of Mr. G. H. Sprague who is Secretary of the Hastings cool store. Here again, Apples predominate, the principal varieties being Jons., Dunns, Delicious, Gravenstein, Rokewood, London Pippin, etc. Mr. Sprague finds that the early variety, Peasgood's Nonsuch, is profitable, as the fruit sizes up nicely and is ready for the local market by Christmas time. It is a tender-skinned variety, however, and has to be handled carefully. In the younger portion of the orchard Jonathan trees this year have no crop on account of the thrips, although for the last two or three years they have been bearing nicely. It is of interest to note that only a couple of hundred yards away the older Jon. trees have quite a substantial crop. These, however, have boughs of Rokewood and Duke of Clarence grafted into them. In the younger portion of the orchard just referred to the trees have not so far been grafted with a pollinating variety. This is a very striking illustration of the value of this intimate pollinating system in periods of thrips infestation.

We noted elsewhere in the district the same pleasing feature, namely, good crops of Jonathan where pollinating varieties had been grafted on. Mr. Sprague's orchard is on the line of the water system supplied by the Bunyip River to the Naval Base. By connecting a pipe line he has an excellent pressure of water for filling his spray vats. The variety Duke of Clarence has set a good crop. Such London Pippin trees as were sprayed in August with red oil have set fairly well, the bloom having come on two weeks earlier than the trees not sprayed. The latter caught the full effect of the thrips infestation, and the crop is practically nil.

Mr. J. D. Hodgins has an orchard of twelve acres, Apples mainly, together with a few Pears. Apple varieties include Jonathan, Rome Beauty, Gravenstein, London Pippin, Reinette, etc. On the whole, the Apple crop is light because of the depredations of the thrips. Jons. and Reinette look like having quite a fair crop, however.

Mr. A. T. Hodgins has an orchard in which 19 acres are bearing with 12 acres of young orchard coming on. On the bearing section the principal variety is the Jonathan. A fair crop has set. It was noted here that the varieties Rokewood and Democrat have been grafted on to Jonathan trees. Some of the other varieties included Statesman, London Pippin, Rokewood, and Democrat.

On the twenty-acre orchard of Mr. R. G. Benton, Jonathans are showing for a good crop. The Dunns, however, will be light. Other varieties include Reinette, Rome Beauty, Alfriston, Del., Red Rome, Rokewood, Demo., together with a young orchard coming on in which Granny Smiths have a prominent place. Mr. Benton also has a few acres devoted to Plums, Pears and Apricots. Among his other activities he runs about 300 sheep.

Mr. A. S. Hodgins has 17 acres of bearing orchard, mostly Apples, with a nice young orchard coming on. Jonathan is the main Apple variety. A fair crop is showing also of Alfriston, Delicious and Rokewood. The Jonathan trees have the Duke of Clarence and Rokewood grafted into them. The orchard is manured with blood and bone and a green crop of peas is turned in in the spring.

At "Homebush," Hastings, Mr. James Turner has a nice orchard of some 14 acres, but the crop this year is decidedly on the light side.

The cool store at Hastings has a capacity for 34,000 cases at one time: though with fruit being taken out from time to time and replaced with other fruit, it is estimated that the quantity stored in a normal season is about 45,000 cases.

The principal fruit grown in this district is the Apple, the main varieties being Jonathan, London Pippin, Rome Beauty, Stewarts, Delicious, and Rokewood.

A few Pears are grown, the principal variety being Packham's Triumph. The rainfall in the Hastings locality is 32 in. per annum. There are practically no late frosts, because of the location between the two bays.

The packing house is alongside the cool store: here 13,000 cases were packed last season. This packing shed is part of the Peninsula Co-operative Company. Because of the uniformly good pack at both Somerville and Hastings this co-operative company won the Colombie Cup last season.

From this district about 25,000 cases are exported in a season. In addition, a steady trade with Brisbane has been developed, at least a truck a week being sent regularly from April to September.

Other orchardists in this district include H. Chapman, J. R. Boulter & Sons, L. H. Vear, F. Unthank, H. E. Unthank, T. M. Gibson, D. J. Chapman, G. E. Hodgins, H. Gold, L. M. Watt, C. Jones, S. Jeremiah, J. Jeremiah, J. Morehead, J. H. Francis, L. Jones, G. De La Haye, S. Orsino, F. L. Davis, R. Davis, J. Ward, and Alex. Hodgins.

Fruitgrowing at Muckleford.

ABOUT FIVE MILES from Castlemaine there is a fruitgrowing settlement at Muckleford, which is in close proximity to Campbell's Creek. High quality Apples and Pears are here produced.

Although the thrips pest has made its unwelcome appearance, the opinion was held that it had not appeared in plague form, and that good crops would probably result.

Calling at the orchard of Mr. R. Whiteside, it was noted that the trees were in good heart. This orchard is 14 acres in extent, all export varieties of Apples being grown, Dunn's predominating. This property was until recently owned by Mr. Todd.

Mr. A. J. Rilen, of Muckleford South, is a young grower who is taking keen interest in his work. Here there are thirteen acres of Apples, principally London Pippin, Jon., Cleo., and Dunn's, also three acres of Pears. When visited the orchard was nicely cultivated. Last season was the off year, and Mr. Rilen is looking forward to a good crop in this coming season.

We found Mr. Jack W. Wilson busy in his lucerne crop. On his 14-acre orchard good quality Apples are produced, the principal variety being Cleo.

Mr. L. Pietsch is an experienced grower, and one who has on several occasions attended the Fruitgrowers' Conferences held under the auspices of the Victorian Fruitgrowers' Central Association. Mr. Pietsch has farming interests in addition to his orchard. He has fourteen acres under fruit. At the time of our visit the Dunn's were in full bloom, the blossoming being very abundant. Beurre Bosc and other Pears are also grown here. Mr. Pietsch referred to the fact that no irrigation facilities were available in the district. Such were desirable instead of depending on the summer rainfall to swell out the fruit.

Mr. E. S. Wood is another young grower who has taken over an established Apple orchard. All these growers have joined the Victorian Fruit Marketing Association.

Another district grower is Mr. F. Robertson, who was away at the time of our visit.

The Muckleford district is charmingly situated in undulating country. The soil and climatic conditions are suitable for fruitgrowing and farming operations, and it was a pleasure to note the interest displayed by the growers in their enterprise in producing high quality fruit and in the interest displayed in the industry as a whole.

USE MORE ORANGES.

A Practical Hint.

The dietetic value of Oranges is too well known to require any further comment, but their use could very well be further extended, at very little cost to the consumer.

Oranges make a splendid drink with hot water and a little sugar. We have used them to replace tea and coffee, and they do well, especially for afternoon "tea" or supper. They are much better than tea in every way. One medium-sized Orange will make two or three cups, and big cups at that. The method is to squeeze out the juice, without crushing the skin. Any variety of Orange will do, even those with damaged skins. Keep back any seeds and place equal parts of juice in each cup and add hot water, not boiling, but nearly so, add sugar to taste. Cold or iced water may be used in summer.

A very tasty tart may be made by grating up the whole of a medium-sized Orange, skin and all, add one cup of sugar and one well beaten egg. Mix and spread over pastry on a tart plate or sandwich tin and bake to suit the pastry. If considered too bitter, use less skin.

Australian and N.Z. Fruit Export.

Interesting Review of the Season.

A COMPREHENSIVE SURVEY of the Australian and New Zealand fruit export season is to hand in the report by F. W. Moore & Co. Ltd., of London.

The report gives the 1931 exports as 4,420,174 cases of Apples and 521,109 packages of Pears. The corresponding figures for 1930 were: Apples 5,310,007 cases, and Pears 415,395 packages.

The freight, at 3/7½ per case, was £850,000.

The quality of the fruit was not of the usual standard, except that Tasmania's quota was better than any sent before.

The condition of the fruit on arrival was generally fair, but too many cases showed wetness. The "Turakina's" shipment unfortunately had brown heart and this caused buyers to lose confidence in other cargoes.

Appreciation is expressed for the findings of Mr. W. M. Carne, plant pathologist, Council for Scientific and Industrial Research. Bitter pit is largely related to the maturity of the fruit at the time of picking.

There were heavy supplies from U.S.A. during the Australasian season, but retailers sold at reduced prices and cleared vast quantities. Allowing for the exchange, growers on the whole did well.

Great regret is expressed for the fact that the heavy duty against Australian fruit in Germany is permitted to remain. This subject has been repeatedly brought before the Australian Government officers in London.

The subjects of wastage, scald and refrigerated transport are dealt with in detail. Much valuable information is conveyed.

The value of advertising is stressed: "The public has been induced to consume fruit to an extent undreamed of a few years ago." The "Eat More Fruit" slogan is best not the particularising of the place of origin. There are two broad distinctions as regards the fruit in the fruit shops: (a) Empire grown, (b) foreign.

As regards nomenclature, there is still confusion, and this should be corrected. There was a marked improvement in packages and packing.

The subject of distribution, is dealt with in detail. After speaking of the development of the trade by sending fruit to markets other than London, Messrs. Moore & Co. point out some of the obvious difficulties of "sending anything like well-regulated supplies to any particular port." The f.o.b. buyers generally desire their fruit during March and the first ten days of April.

The long distance from Australia and New Zealand to British and continental markets is a limiting factor, also that the season is a short one, while varieties must be sent from the trees as they mature. The nearer fruit can be taken to large areas of consumption the greater quantity will be disposed of. Prices are governed by the ordinary factors of supply and demand.

With regard to cases, the report states that the only real advantage of the pine case is its lightness. Seasoned hardwood, however, nicely planed, is not excelled in appearance by the pine case. The buyer is not satisfied with the external view, but lifts the lid or side to see what the fruit is like.

Appreciation is expressed for the scientific research work being conducted at East Malling, Long Ashton, and Cambridge: the work being helped greatly by the contributions from the Empire Marketing Board.

The report closes with details of the quantities by each and the ports of distribution. Altogether the report is interesting and valuable.

Sultana Drying Experiments.

Summary of Report on the 1931 Season.

[Conducted conjointly by the Council for Scientific and Industrial Research with the Horticultural Branch of the Department of Agriculture of South Australia on vineyards situated at Berri and Renmark.]

(By F. R. Arndt, Horticultural Instructor.)

THESE EXPERIMENTS in Sultana drying were undertaken with the object of collecting data in regard to various systems used in the drying of Sultana Grapes, and, to ascertain how the quality of the fruit, when dried, was affected by the nature of the soil upon which it was grown, and by the climatic conditions operating during the drying period. The experiments were conducted at the vineyards of Messrs. Basey and Howie, of Renmark, and of Mr. J. Partridge, of Berri.

The Council for Scientific and Industrial Research was represented at the experiments by Mr. A. C. Ingerson, of Berri, acting under instructions from Mr. A. V. Lyon, M.Sc., of Merbein, who collaborated with myself in carrying out the work.

The different dipping systems experimented with were as follows:—

The cold carbonate of potash dip.

The standard hot mixed dip.

The Ingerson dip.

The modified hot caustic soda dip.

Two series of experiments with the above-mentioned dips were conducted at each of the vineyards previously referred to.

First Series of Experiments.

The first series of experiments were conducted at Berri and Renmark between February 17 and March 9, under good weather conditions, the highest maximum temperature being 101.6 deg. Fahr., and the lowest maximum 69 deg. Fahr. No rain fell during the drying period.

The fruit treated was of good quality at both vineyards, the Renmark fruit, which registered 12 deg. Baume, being a little sweeter and of a more golden color than the Berri fruit, which showed a sugar test of 11½ deg. Baume, and was greener in color.

The soil upon which the fruit was grown was in both cases a firm clay loam, of which the Renmark soil was slightly the firmer of the two.

Strength and Temperature of Dipping Solutions.

The strength and temperatures of the dipping solutions used were as follows:—

Cold Potash Dip.—Strength, at rate of 25 lb. carbonate of potash and 1½ pints of olive oil to 50 gallons of water. This formula was used at both vineyards.

Standard Mixed Dip.—At Berri—Strength, 2½ lb., carbonate of potash, 2 lb. caustic soda, and 1½ pints of olive oil to 50 gallons of water. Temperature, 178 deg. to 181 deg. Fahr. At Renmark.—Same temperature and strength as at Berri, with the exception of a reduction of ½ lb. of caustic soda.

Ingerson Dip.—At Berri—Strength 2½ lb., carbonate of potash, 1 2-3 lb., caustic soda, and 2 oz. of olive oil to 50 gallons of water. Temperature, 187 deg. to 190 deg. Fahr. At Renmark.—Same temperature and strength as at Berri, with the exception of about 3 oz. increase in caustic soda content.

Modified Hot Caustic Soda Dip.—Strength—1½ lb. caustic soda to 50 gallons of water. Temperature, 190 deg. to 193 deg. Fahr. This formula was used at both places.

The Time of Drying.

At Berri.—The time of drying from dipping to the placing of the fruit into sweat-boxes was as follows:—Modified Hot, Standard Mixed Dip, and Ingerson Dip—16 days. Cold Potash Dip—21 days.

At Renmark.—Time on rack—Mixed Dip, Ingerson Dip, and Modified Hot Dip—13 days. Cold Potash Dip—16 days.

Time from spreading on to rack until placing into sweat-boxes—Standard Mixed Dip, Ingerson Dip, and Modified Hot Dip—16 days. Cold Potash Dip—20 days.

The fruit treated by the Cold Potash Dip was in both instances sprayed with the Standard Cold Potash Solution three times while on the rack, and was washed after its removal from the rack.

The fruit treated with the Modified Hot Caustic Soda Solution was sprayed (with the exception of that situated on half of the top tier) with the Standard Cold Potash Solution within 48 hours after spreading on the rack. The effect of such spraying was a very slight brightening up of the color of the dried fruit, but did not shorten the drying period as compared with the fruit that had not been sprayed.

Quality of Dried Fruit.

At Berri.—The quality of the dried fruit was excellent, and the color, from light golden to more amber shades, occurred in the following order:—1, Cold Potash Dip; 2, Standard Mixed Dip; 3, Ingerson Dip; 4, Modified Hot Caustic Dip.

At Renmark.—The dried fruit was of a darker shade than that obtained at Berri. This may be chiefly accounted for by the more amber colored nature of the fresh fruit, and by the fruit not being shaded as much as in the Berri experiments. An interesting fact to note in this connection is that the fruit treated by the Cold Potash and Standard Mixed Dip formulas, which contain the largest amount of olive oil, was not browned as much by the direct rays of the sun as that treated by the other solutions containing less oil, showing the protection against sunburn accorded to fruit that has been well coated with olive oil.

The shades of color produced in the dried fruit by the different dipping solutions was from golden to darker shades in the following order:—

1, Cold Potash Dip; 2, Standard Mixed Dip; 3, Ingerson Dip; 4, Modified Hot Caustic Dip, thus coinciding in each instance with those of the Berri trials.

Second Series of Experiments.

The second series of experiments were conducted under less favorable weather conditions than those of the first series. The fruit was dipped at Berri on March 4 and at Renmark on March 5. The highest maximum temperature during the drying period was 98 deg. Fahr., and the lowest maximum 62 deg. Fahr. Rain fell on March 13, 52 points; March 19, 5 points; March 20, 5 points; March 21, 7 points; March 22, 5 points; and April 1, 30 points.

Quality of Fresh Fruit.

At Berri.—The fruit was of good quality, being from slightly greenish-yellow to bright golden in color. The sugar content was 13 deg. Baume. At Renmark.—The quality of the fresh fruit was only fair, much of it being

over-ripe, and there was a large number of dark, burnt berries on the bunches. The sugar content of the fruit registered 14 deg. Baume.

The nature of the soil upon which the fruit was grown was, at Berri, a firm red loam with a moderate amount of sand in its composition, and at Renmark this consisted of a stiff red loam.

Strength and Temperature of Dipping Solutions.

These were in some instances varied from those used at the first series of trials, owing chiefly to the altered condition of the fruit, and consisted mainly of additions of caustic soda, in order to crack the berries sufficiently.

The Cold Potash Dip.—This was used at the Standard Potash strength of 25 lb. to 50 gallons of water, but the olive oil content was raised from 1½ pints of olive oil to 2½ pints of that used at the first series of trials.

The Standard Mixed Dip.—Strength—2½ lb. carbonate of potash, 2½ lb. caustic soda, and 1½ pints olive oil to 50 gallons of water. This strength was used at both Berri and Renmark, and is an increase in caustic soda of ½ lb. to 50 gallons. Temperature—Berri, 177 deg. to 181 deg. Fahr. Renmark, 178 deg. to 181 deg. Fahr.

Ingerson Dip.—Strength, 2½ lb. carbonate of potash, 2½ lb. caustic soda, and 2 oz. olive oil to 50 gallons of water

At Renmark.—The quality of the dried fruit produced was inferior to that produced at the other three series of drying trials, the fruit treated by the Cold Potash Dip especially darkening in color during damp weather, although it was not wetted by rain falling upon it. The fruit treated by the Ingerson Dip appeared to be the least affected by the adverse weather conditions. The color of the fruit, from light to dark, according to the different dipping processes, varied in the following order:—1. Ingerson Dip. 2. Standard Mixed Dip. 3. Modified Hot Dip. 4. Cold Potash Dip—thereby differing greatly from that obtained at the previous trials.

Summary of Results.

The chief results obtained at these experiments in Sultana drying—as far as the conditions operating during the past season seem to indicate—are briefly as follows:—

1. That the Cold Potash Dip produces the finest colored sample of dried fruit, provided that the fresh fruit used is of first-class quality and that weather conditions are hot and dry. However, with inferior fruit and unfavorable weather conditions the results obtained from the use of this dip are disappointing. Also, the drying period of fruit processed by this dip is from four to seven days

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was used at both places. Temperature, Berri, 184 deg. to 188 deg. Fahr; Renmark, 183 deg. to 186 deg. Fahr.

Modified Hot Caustic Soda Dip.—Strength—At Berri, 2 lb. caustic soda to 50 gallons water. Temperature—188 deg. to 193 deg. Fahr. At Renmark, 2½ lb. caustic soda to 50 gallons. Temperature—188 deg. to 193 deg.

Time of Drying.

At Berri.—Time on rack—Standard Mixed Dip, Ingerson Dip, and Modified Hot Dip—17 days. Cold Potash Dip—20 days.

Time from spreading on to rack to placing into sweat-boxes.—Standard Mixed Dip, Ingerson Dip, and Modified Hot Caustic Dip—20 days. Cold Potash Dip—24 days.

At Renmark.—Time on rack—Standard Mixed Dip, Ingerson Dip, and Modified Hot Dip—21 days. Cold Potash Dip—24 days.

Time from spreading on to rack and until placing into sweat-boxes.—Standard Mixed, Ingerson, and Modified Hot Dip—22 days. Cold Potash Dip—29 days.

Quality of Dried Fruit.

At Berri.—The dried fruit was of first-class quality for all kinds of dips used, and the color, from light golden to slightly darker shades, varied in the following order:—1. Cold Potash Dip. 2. Standard Mixed Dip. 3. Ingerson Dip. 4. Modified Hot Dip—thus coinciding with the order obtained at the First Berri and First Renmark Series.

longer than that treated by the other dipping systems under similar weather conditions.

2. That the Standard Mixed Dip and the Ingerson Dip (also a mixed dip) have consistently produced a lighter colored sample of dried fruit than that resulting from the use of the Modified Hot Caustic Soda Dip, while the drying period of the fruit is the same in both cases.

3. That trials with a dipping process between that of the Standard Mixed Dip and Ingerson Dip would probably give interesting results, as it is probable that the use of 1½ pints of olive oil to 50 galls. of solution is excessive in the former dip, while the use of 2 ozs. of olive oil in the latter dip is often insufficient to protect the fruit from sunburn, unless it is well shaded while on the racks.

I would therefore suggest that for next season a dipping system be tried, containing the following ingredients:—

2½ lbs. Carbonate of Potash.

1½ lbs. to 2 lbs. Caustic Soda.

½ pint of olive oil to 50 galls. of water, at a temperature of 180 deg. to 185 deg. Fahr.

4. Regarding the suitability of the dips used to the fruit produced on different classes of soil, no definite conclusion can be drawn from one year's trials, and further experiments are necessary to obtain fuller data upon this subject.—"S. Aust. Journal of Agriculture."

Fruit Tree Plantings in 1931.

FEWER PEARS PLANTED: APPLES NORMAL.

Increased Demand for Nut Trees.

AN INTERESTING REVIEW of the 1931 planting season is given by John Brunning & Sons, nurserymen and fruitgrowers, of Somerville, as follows:—

Cherries.—A good business was done in Cherry trees, mainly in varieties like St. Margaret, Florence, Burgsdorf Seedling, Early Lyons, Bigarreau Napoleon, Werder's Early Black, Early Purple Gean.

The stock demanded was for those varieties worked on Kentish stock, with the exception of a few hundred on Mazzard, which, in several large Cherry districts, under drought conditions, died right out. Every few years a change to either stock occurs, but as the years go by, the Mazzard stock enquiry becomes less and less—the exception being that Werder's Early Black and Bigarreau Napoleon, are inclined to overbear on the Kentish, and so are worked on Mazzard to overcome that difficulty.

Earlier bearing, and consistent bearing are the qualities which are the chief factors for the adoption of the Kentish—for general orchard planting.

Pears.—Pear trees sales were slow—Williams or Bartlett were almost neglected. Export varieties, Josephine de Malines, Winter Nelis, Beurre Bosc, Packhams Triumph, were in short supply. Doyenne du Comice, the highest priced Pear in the export trade through some unaccountable reason was entirely neglected, and stocks are still on hand as yearlings. Winter Cole sales were very restricted. Keiffers Hybrid, Gansells Bergamot, Broome Park, Glou Morceau, appear to be taking a back place, whilst a Pear of the quality of P. Barry should be planted for the late export trade, as it is really an ideal Pear.

Howell, an easily grown Pear, showed that supply being equal to the demand for the variety.

Pears generally should prove very profitable as prices realised abroad show that an immense market is just being opened up for future trade—refrigeration difficulties up to the last few years was the obstacle to successful Pear shipments—now it has been overcome, will call for increased supplies of this fruit.

Apricots.—Trade, except for few overseas orders, was very slow, varieties like Moorpark, Mansfield Seedling, Tilson, Trevatt, Hemiskirke, though 1,500 were available not more than 3,000 were sold—Newcastle, Oullin's Early Peach, Early Moorpark, were in keen demand, and shortage was shown in these varieties.

Excessive wet has killed many acres of Apricot orchard, so that in a few years there will be great shortage of this fruit, which is one of the main jam fruits.

Peaches.—Clingstones, like Pullar's Cling, Golden Queen, Peak Cling, were in keen demand, and supplies were just sufficient.

Healesville Cling, Thieles Cling this year were almost untouched. Pelora, Tuscan, Phillips, Sims, and Levis, are being forced out of existence as being unsuitable to the requirements of the canning trade.

Yellow fleshed freestone varieties in demand were Late Crawford, Elberta, Lady Palmerston, and J. H. Hale, whilst Comet and Salway are fast losing their popularity.

White fleshed varieties to the fore were Wiggins, Alton, Aunt Becky, Hales Early, High's Early Canada, Brigg's Red May, Sweet Seventeen, Carman, Watt's Early, Royal George, Lippiatt's Late Red, La Vainqueur, Mayflower and Ruby Red.

Flowering Peaches for the retail trade showed little demand owing to most nurseries having a good supply for the year.

Nectarines, with the exception of New Boy, Goldmine, Early Rivers, Cardinal, Bevis Pick, the trade was almost neglected.

Almonds.—Due to confectionery trade, demand, planters are being educated to the fact that a good home market for Almonds exists, and being protected by duties of 6d. per lb., has promoted some interest in Almond culture, our sales were almost up to supply, so that was very satisfactory.

Apples.—Despite the setbacks to his fruit trade, the Apple plantings were almost normal—the varieties mainly required were Granny Smith, Jonathan, Cleopatra, Cox's Orange Pippin, Crown Beauty, Delicious, Glengyle Red, Red Gravenstein, King David, Dunns, London Pippin, Reinette du Canada, Rome Beauty, Red Statesman, Stayman Winesap, Tasma, Willie Sharp, Wilson's Red June and Yates, whilst lesser enquiry was for Rainer, Twenty Ounce, Lord Nelson, Stewart's Seedling, Peasgood Non-such and Gravenstein. Emperor Alexander, though a



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beautiful Apple, has proved that it bruises too easily, and consequently with others like Esopus Spitzenburg, Worcester Pearmain, are going out of cultivation.

Dwarf Apples are engaging some attention, but greater publicity is required. These are suitable for limited spaces, planting 6 to 8 feet apart. All main varieties are available, and by use of dwarfs, earlier bearing and consistent cropping is assured. It may not be generally known how the dwarf tree is obtained, it is by working Paradise to Northern Spy, then the desired variety to the Paradise the following year.

Figs.—Trade showed that Brown Turkey, Marseilles, Gros Verte, St. Domingo were the popular varieties.

Quinces.—These are always an uncertain quantity—this year the demand fell away a good deal.

Loquats.—Named varieties like previous years, were completely sold out.

Citrus.—There was considerable falling off in sales, quite 75 per cent.

Plums.—European Plums were slow, dark varieties almost neglected, whilst Coe's Golden Drop and Jefferson, Green Gage, showed keen enquiry.

Prunes showed that these are not yet neglected, and Prune de Agen, Robe de Sergeant, Splendour, accounted for good sales.

Japanese Plums were in good demand, mainly on Myrobolan stock, which has proved the most satisfactory under all conditions for the last 40 years. Some districts show a tendency towards the Peach stock, but we feel this is only temporary, for wet conditions will kill the Peach easily, and it is not as long lived as Myrobolan. The chief varieties required were Santa Rosa, Wilson, Shipper, Shiro, Satsuma, October Purple, Narrabeen, Formosa, Early Gem, Doris, Delaware, Climax, Burbank, Beauty, and Alpha. Promising new varieties available in 1932 are Paterson, Late Billington, McNamara, Purple Gem, Wright's Hybrid, Venio, and Early Queen.

There is a decided tendency in the trade to extend credit. The extension of credit is, we believe, the cause of the present financial depression—its contraction should be the aim of every individual to get to sane, common-sense, business. Be paid for your goods—and pay the other fellow for his supplies to you. Chain store businesses prove this: "Pay cash and get cash." Long credits usually end up in not being paid at all, or very little at any rate.

It's the goods you get paid for which carry the business along, not the credits. The old saying: "Bird in the hand is worth two in the bush," is very true.

The orchard part of our business showed good returns with a good crop and fair prices.

New Cool Store.

We are erecting a 10,000 case capacity cool store, with direct expansion, electrically driven from Yallourn power on our Somerville property, and as time progresses we will see if the move has been a wise one.

Reviewing the past 12 months, summing up, the season we could say was good—the fruit having helped the nursery budget considerably.

Mitcham (Vic.) Show.—The Annual Fruit, Flower and Vegetable Show conducted by the Mitcham Returned Soldiers, will be held in the Mitcham Memorial Hall, Mitcham, on April 16, 1932.

The Chairman of the Committee is Mr. C. Wallace, Wantirna, and the Honorary Secretary, Mr. E. V. Panelli, Doncaster East Road, Mitcham.

GREEN MANURING.

Suitable Crops According to Climate.

GREEN MANURING benefits the soil in two ways. It enriches the soil, in the first place, by supplying it with a considerable amount of readily available plant-food, and in the second place, by adding humus, and thus improving the soil's texture and its power of absorbing and retaining moisture.

The district and the conditions will largely determine the choice of crops for green manuring purposes, but farmers generally are not inclined to sow a crop which occupies the land too long unless it can be grown as a cover or companion crop, or unless it can be utilised partly for fodder purposes. An indication of the crops which may be chosen can be obtained from the following classification:—

Very Warm Moist Climates.

Spring or Summer Sowings.—Velvet Beans, Sunn Hemp, Cowpeas, Pigeon Peas, Dolichos Beans, Florida Beggarweed.

Autumn or Winter Sowing.—Field Peas, Vetches, Clovers.

Warm or Temperate Moist Climates.

Spring or Summer Sowings.—Cowpeas, Dolichos Beans, Soy Beans.

Autumn Sowing.—Field Peas, Vetches, Clovers.

Moderately Dry Climates.

Autumn Sowing.—Field Peas, Vetches, Clovers.

Cool Climates.

Late Spring Sowing.—Soy Beans.

Autumn, Spring or Summer Sowing.—Field Peas, Vetches, Clovers.

Only leguminous crops are included in the above in view of the superiority of the legumes for green manuring generally, but in some districts fodder crops which are non-legumes are sometimes grown for feed, and a little aftergrowth is sometimes allowed for ploughing in. This practice has some benefit in improving the tilth of the soil, but is not as good as the growing of legumes for increasing the organic matter and nitrogen in the soil.—N.S.W. Department of Agriculture.

NEW SOUTH WALES.

The death occurred in the middle of November of Mr. Duncan St. Clair, a native of Scotland, aged 73 years, and a well-known orchardist in the Kiama district (N.S.W.). The deceased died at his home, Glenloth, Ger-ringong, and leaves a widow, one son, and two daughters.

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The Problem of the "Off" Year.

Importance of Thinning.

Views of South American Reader.

The Editor, "The Fruit World of Australasia."

Dear Sir,—I have read an article in your publication of April, 1931, by Mr. H. N. Wicks on the "Problem of the Off Year." It is very interesting, and I remember reading some previous articles of his on applying fertiliser in the autumn. If I might be permitted to air my views, I would say that, to me, the comments of Mr. Frank M. Read on the above-mentioned article seem to be very much to the point. What strikes me as being so remarkable, if you will permit me to say so, is that it is possible to quote one instance of thinning as having tended to eliminate this "off" year.

Surely thinning is one of the most important operations be the tree on any root stock, but more particularly when it is on Northern Spy. I should class it with spraying for importance and far ahead of pruning. A large tree on Northern Spy might not suffer if it were not pruned for one year, but would be ruined if all the fruit were left on it. We have no problem of alternate cropping here, although I would not go so far as to declare publicly that it is because we thin regularly. I should say that a tree is suffering if it cannot produce fruit each year, and I think Mr. Read indicates the right approach to the matter, and that it is a question of the quantity of leaves on the tree.

We know that the perfect Apple or Pear, on whatever stock, is only produced by having the requisite number of leaves, although shade sometimes bothers us, and although we never, probably, produce the perfect fruit. The number of leaves necessary varies according to the variety, but we generally take twenty as an average, for the Apple. The tree suffers badly as well as the fruit, if the proportion of leaves to fruit is not more or less what it should be, and therefore rests for a while.

Naturally, the size and what might be called the quality of the leaves must affect this matter too. Small leaves weakened by attacks of bryobia will be of less use than large dark-green leaves. For this reason, thinning is not the main operation necessary, although always an important one. The main idea, as we see it here, is to build up a mass of good leaves and then thin to the amount of fruit that these leaves will support, as near as one can judge.

Pruning may produce more and better leaves, but probably not in a position to support the fruit unless the pruning is hard. It may, however, reduce the quantity of fruit, and so make a better balance.

Fertilising will probably do most towards producing the class and quantity of leaves required, but here again we must be careful how we say this.

A Pear tree on free stock will produce perhaps all leaves and no fruit if heavily fertilised; but a tree on Northern Spy in full bearing, say, four to six boxes of extra fancy fruit, will almost always respond just as desired to fertiliser, because, as it would seem, the root, being a semi dwarf, can never quite produce the requisite number of leaves for the fruit it produces.

Here, we find that these Apple trees on Northern Spy produce too much fruit and produce it too soon, and our problem is to keep them growing and healthy. We thin off, as a rule, about half the fruit on the tree. This does not reduce, however, the number of boxes of fruit packed, because the fruit that remains is larger and finer. The

rule is to leave a full hand's span (from little finger tip to thumb tip) between each fruit, but sometimes after having done that it is still necessary to take off more fruit. This leaves us with, let us say, Delicious, five boxes; King David, five or six boxes; Jonathans, four to five boxes; and so on, on trees ten years old. I admit that we have no older trees than this in the valley.

I would say that

the application of fertilisers

certainly produces more fruit, but in a roundabout and indirect way. Mr. Read puts the matter in a nutshell. The formation of propagative material is not forced by fertilisers. One might almost say, to the contrary. Who has not seen a weak, suffering tree producing fruit in enormous quantities, or a healthy, vigorous tree with much leaf wood and very little fruit? As fertilisers produce more and better leaves, the tree can carry more good fruit, and as they inspire more growth of wood, that wood, when ripe, will bear more fruit, or rather will enable the trees to bear more fruit. In short, fertilisers will, or should, properly and carefully applied at the right moment, build up a bigger bearing surface and more elements to care for the fruit thus born. But there is no short cut.

In conclusion, Mr. Editor, please forgive me if I have "buted in," as the Americans say, on your "Diggers," as you used to call yourselves.

With very best wishes, yours sincerely,

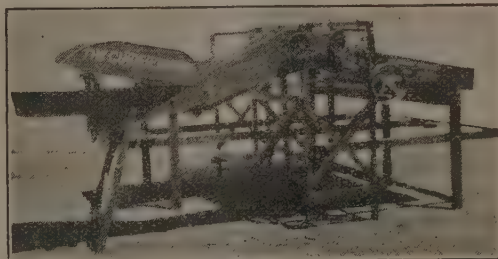
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Research in Fruit Culture.

Report by Mr. H. N. Wicks, Chairman Research Committee of the South Australian Fruit Marketing Association.

Codlin Moth Control and Biennial Cropping.

THE RESEARCH COMMITTEE of the South Australian Fruit Marketing Association was formed during the past season's operations with a view to investigating the more serious problems which the grower has to face in the production of his fruit, and more especially with these disabilities under which the Apple and Pear growers are at present laboring.

The personnel of the Committee is as follows:—Messrs. J. B. Randell, R. O. Knappstein, M. G. Basey, J. S. Hammat, R. B. Pritchard, D. W. Hannaford, E. W. Dearman, F. B. James, A. C. Peterson, H. N. Wicks.

The Committee considered that the two most vital problems at present are codlin moth control and the biennial cropping of Apples, and consequently have chiefly confined their activities to these two matters.

With regard to

codlin moth control,

experiments are at present being undertaken in the orchards of Messrs. Randell, Basey, Pritchard, Knappstein, Hammat and Wicks to determine the peak periods of emergence of the codlin grubs in the various districts, and interesting and valuable data is expected from these observations.

Traps and bandages are being used in these experiments and a good deal of work is necessary during the daily inspection, which includes the temperature and weather conditions, but your Committee can report good progress, although up to the present, with the exception of the Clare district, little data with regard to codlin has been collected, but an enormous number of cutworm moths have been trapped, and even this information may be valuable to horticulturists, as these grubs cause a great deal of damage and we may yet find that trapping is a commercially practicable method of checking their ravages, and may give us some measure of control.

However, it is yet early to expect much definite result from codlin traps in the cooler districts, but with the coming of the warmer weather which we are now experiencing we no doubt will have information to place before later meetings.

The matter of

Biennial cropping

is being tackled from two angles. Firstly, tests with nitrogenous manures have been started this year in several districts, and will continue for four years at least, and pruning tests are also being carried out. Of course, no definite results can as yet be reported from this most important section of our work.

Your Committee honored me by a request that I should attend the recent Conference held in Melbourne to represent the Research section of the S.A.F.M.A., and I was able to report a very satisfactory Conference.

A full report was submitted to the monthly board meeting, and it would take too long for me to more than touch on the matters which were discussed. It was very gratifying to learn that the Council for Scientific and Industrial Research were very thoroughly investigating the matter of the carriage of our fruit to overseas ports, and that Mr. Carne had, during his trip to England, gathered much valuable information which will be made available at an early date. It is the intention of the Council to thoroughly investigate this matter and examine the different stages of transport right from the tree to the consumer.

The Council is also delving very seriously in the matter of biennial cropping.

The matter of nomenclature also came up for discussion and a recommendation was made to the general meeting regarding several varieties. This is, of course, only a start, but the matter of nomenclature is a very important one and is to receive further careful study.

I would also like to report that Dr. Davidson, of the Waite Research Institute, together with Mr. Evans, of the C.S.I.R., have been making weekly visits to my orchard at Balhannah during the recent thrips infestation, and I must say that they are working at very high pressure in this matter.

It is very gratifying to report that Mr. Quinn has been a regular attendant at our meetings, and we desire to thank him for his help at those meetings and also for allowing his inspectors to assist your Committee's operations in the various sections of their operations.

DISPOSAL OF WASTE FRUIT.

FOR THE EASY and effective destruction of waste and grub-infested fruit, orchardists would be well advised to adopt the use of the covered pit devised by the Entomological Branch of the N.S.W. Department of Agriculture. The pit is about 5 by 8 feet across, and some 5 or 6 feet deep, and is covered with a lid consisting of a wooden frame standing 2 feet above the ground, covered on top and at the sides with ordinary galvanised iron sheeting. In the top is cut a small chute (either self-closing or with a tightly-fitting lid) through which the waste fruit is thrown.

Such a pit, tightly covered as described, is a ready means of disposing of waste and infested fruit, and obviates the need for its boiling or burning, which is a consideration in districts where wood is not readily obtainable. Details of the covering of the pit are obtainable from the Department.

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TASMANIAN FRUIT EXPORTS.

Instruction and Inspection at Packing Sheds.

(By P. H. Thomas, Chief Horticulturist, Tasmanian Department of Agriculture.)

REVIEWING THE PRESENT Apple and Pear export season, it is pleasing to hear the comments both at home and abroad on the improvement in the packing and presentation of our fruit on these markets. Fruitgrowers are now generally taking a keen interest in the latter phase, and by the adoption of neatly-made containers, clear and distinct stencilling, the use of attractive labels, are adding the "appeal" to a pack of quality fruit that is one of the first principles of marketing.

This year also saw the inauguration of the system of instruction and inspection being carried out at the packing sheds, and from the commencement of the export season the officers of the Horticultural Division were concentrated on this work. During the period of export the instructors, acting in co-operation with the wharf inspection, visited over 1,200 growers, and assistance was directly rendered toward improving the packing, grading and sizing of consignments where it was indicated that such was desirable.

Fruitgrowers generally have expressed their appreciation of the work that has been performed, and in many cases where in the first instance the officer was treated with a certain amount of suspicion, after the first visit his services have been directly sought after. Apart from slack or too tight packing, the majority of contraventions

this season have occurred in the sizing. In many cases the instructors found that this was brought about by the sizing machine being inefficient or not properly adjusted, and were able to correct this by a few minutes' overhauling and testing.

Other contraventions occurred through misinterpretations of the export regulations, and the instructors were frequently of service to growers in rectifying such errors. It is also of interest to note that in spite of the large export overseas the number of contraventions was well below that of the previous season.

During the season a fair number of growers adopted the Canadian type case for overseas consignments, and a large number of requests were received for demonstrations as to the packing requirements of the new style of container.

With the promise of another good crop in the coming season and a reasonable demand for the fruit, it is hoped that further advances in the quality and get-up of our fruit may be made. This would serve to establish more firmly the good impression created by Tasmanian fruit last year and stimulate the public demand for this product.

SAVED THE CAT.

After thousands of cases of Apples had been stacked in the hold of a big overseas liner at Port Melbourne recently, it was discovered that the ship's cat had been imprisoned, behind the cases. Stevedores set to work to remove the cases and after several hours' work released "pussy." It is estimated that the wages of the men while employed in this work amounted to £25. Few cats have been rescued at such a cost as that.

Empire Preference

—is now more than a political catch-phrase. It is business in £ s. d., and Australia can build trade on the markets of the Empire that will bring in the tide of prosperity. We must not expect the full benefits of tariff preference unless we meet the requirements of the Empire buyer and deliver the right goods packed in the right way.

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Fruit Markets in the East.

Continued from "Fruit World," June, 1931.

British Malaya.

THE LONG MALAYAN peninsula stretches southward 400 miles, with its tip almost on the equator. Its total area is 52,500 sq. miles, and its population 3,864,000. The country is low-lying, with many shallow rivers, well developed rural districts present the appearance of high cultivation. Government railways traverse the country from north to south, and motor highways are maintained between all larger towns.

There is a mixed population of Malays, Chinese, Indians, Eurasians, and 21,093 Europeans. The principal productions are rubber and tin. The total rubber acreage in 1928 was 2,750,000, and the export 408,693 tons. Forty per cent, of the world's tin comes from Malaya, the export being 61,935 tons. Although 663,000 acres of rice are grown, this is not sufficient for the local demand.

Large amounts of fresh fruit are consumed by all classes. Canned fruits are not in demand among the Chinese because of their sweetness. Fresh fruits are cheap and abundant. The people like a hard firm fruit. The diet of all classes is characterised by a demand for strong condiments as a zest to the appetite in the consumption of rice, vegetables and meat.

From both hemispheres and from East and West, fresh fruits come into the city of Singapore at the cross roads of the world. For practically twelve months of the year fresh imported Grapes, Apples and Oranges are on sale.

The chief sources of supply are Australia: Apples, Peaches, Pears, Grapes, Plums and Oranges.

U.S.A.: Oranges, Apples, Grapes, berries, Pears, Grape-fruit.

Japan: Apples and Pears.

China: Pears, Apples, Oranges, Pomeloes, Persimmons. Spain and other Mediterranean countries: Grapes.

Palestine: Oranges.

Apples are the most popular of imported fruits, delivered costs from California range from 3.30 dollars to 3.70 dollars a box. The wholesale price is about 4.90 dollars a box and the retail 4 to 6 cents each. Oranges in boxes of 156 cost delivered 8.60 to 8.80 dollars a box, and the average wholesale price 9.05 dollars, and sold retail at 5½ to 7½ cents each in Singapore and 15 cents at Penang.

Grapes have increased enormously in their shipment and sale during the last two years. Costs and prices are decidedly erratic, tending to fluctuate violently according to visible supply.

A small immediate surplus sets the Chinese market in a selling panic. Delivered costs are from 3.25 to 4.80 dollars per 32 pound package, and have sold from 3.75 to 5.10 dollars retailing at 28 to 34 cents a pound.

Pears and Plums have been received, but only in small quantities. Losses during shipment are heavy. Fresh fruit is ordered by Chinese wholesalers who indent through local agents. Singapore is a free port, thus there is no duty charged. Harbor dues average 5.70 cents a case, and delivery from ship to cold storage, thence to dealers about the same amount.

Canned fruit is on sale at all the better stores in the towns, railway stations and plantation stores.

Fresh fruit, whether native or imported, is preferred at an equal price. Canned Grapes are the most popular and their sale could probably be extended.

Dried Fruits.—With the exception of Raisins and Prunes, dried fruits have small sale in Malaya. Raisins are not sold in such abundance as in most other countries of the Far East. Prunes rank second in volume, and are esteemed for their laxative qualities. However, their consumption has not become general. If Prunes of good quality could be retailed at two for a local cent (one farthing) they might have a large sale.

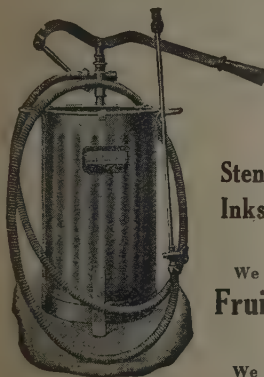
As the prices of rubber and tin are at present low, the country suffers from a depression which is reflected in the purchasing power of the people. Plantation workers are paid 25 to 35 cents a day and skilled workers in the city a dollar a day. There are a considerable number of well-to-do Chinese.

Netherland East Indies.

THE EASTERN EMPIRE of Holland is a series of large and small islands between eastern Asia and Australia. Among the most important are Java, Sumatra, Dutch Borneo, Celebes, Dutch Timor and Dutch New Guinea.

Java and Sumatra are commercially the most important of the group, Java because of its dense population, is the chief province of the Netherland East Indies. In an area of 50,800 sq. miles, are crowded 37,433,000 peoples, or about 750 per square mile, making this island one of the most thickly settled regions of the globe. The other islands have an aggregate population of about 15,000,000. The great majority of the people are natives, in the whole zone out of every 300 people, five might be Chinese and one a European. All the remainder would be natives.

The principal exports are rubber, sugar, oil, tobacco, and tea; other important items are coffee, tin, pepper and spices. The chief imports are cotton piece goods and rice. Wages of the natives range from 15 to 20 cents a day;



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the day's labor lasts only from 6 to 11 a.m. 99 per cent. of the native population, and 90 per cent. of the foreign Asiatics have an income of less than \$96 a year. Of the Europeans, over 63 per cent. have less than £500 a year.

Rice is the staff of life, but large amounts of other foodstuffs are used, and the diet here is more varied than elsewhere in the East. Large quantities of fresh fruit are consumed between meals.

Throughout Java and Sumatra the Government has built public markets, in which large quantities of local fruits are sold. The larger fruits are bought by the slice or segment, the smaller by the piece or dozen.

Australia is able to ship Apples and other hardy fruits from its west coast as deck cargo on short voyages of six or seven days at low rates. Fruit received from the east coast of Australia is shipped as refrigerated freight at rates lower than those from America.

Originally Australian fruit was not well graded, and was discriminated against in the market. More recently the grading and quality have improved, so that Australian fruit, particularly Apples, has the largest demand in the islands.

Cold storage facilities are available at Batavia and Surabaya, and also at Midan, in Sumatra.

Canned Fruit.—Large quantities of these are not consumed in Netherland East Indies. About three-fourths of the canned fruit brought into the island is from U.S.A. China ranks next in importance. Australian canned fruits come to Java in smaller quantities, and do not create any considerable competition with American canned fruit.

The total consumption of canned fruit from America aggregates 60,000 cases a year, of which half is canned Grapes, the remainder being Peaches, Cherries, Pears and Apricots.

Dried Fruits.—Raisins are the only American dried fruit which sells extensively to the native population. Dates from the Near East are also imported in large volume. Efforts to popularise American dried fruit, such as Raisins and Prunes, have to meet the competition of the cheap Arabian Date.

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Apples and Pears also arrive from Japan and China, and Oranges from Jaffa, in Palestine. U.S.A. sends Apples, Grapes, Oranges and Pears.

The heaviest demand for imported fruit is for Apples. Primarily the Dutch like a hard firm Apple, and a hard sour Apple finds a ready market among them. The Chinese prefer a sweet Apple, if it is highly colored, so much the better. Apples are wholesaled at 3.25 to 5.00 dollars a box.

From a standpoint of suitability there is little to choose between the Australian and U.S.A. Apples, the reason for the larger imports of Australian Apples into Java is that the Australian Apples reach Java at a time when there is comparatively little native fruit on the market, whereas U.S.A. Apples arrive during the heaviest marketing period of domestic fruit. Australia has also the advantage of a short voyage and cheap transportation.

Grapes rank second among fresh fruit imports wholesaling at from 4.80 to 6 dollars a 32 lb. keg, retail 36 to 44 cents a lb. Oranges, 156 to 200 to the box, sell from 6 to 8 dollars a box wholesale and retail at 6 to 10 cents each.

The hard Pears from China and Japan are in demand. The American Pear is too soft to appeal to the Chinese or native trade.

At present the total sales, per year of Californian Raisins are from 12,000 to 16,000 cases; trade could be increased by the expenditure of funds for trade promotion. The school boy of eastern Java has ceased to buy Raisins as a confection, possibly because trade promotion has been discontinued.

Prunes offer the best opportunities for larger additional sales. The natives and Chinese like Raisins, and there is a growing liking for dried Prunes; they also like canned Grapes and Cherries. Among fresh fruit they like Apples, Grapes and Oranges. Other fruit, fresh dried or canned is of little interest to them. It is difficult to get American fruit down to such units of purchase that a small coin will complete a sale.

Fresh imported fruit are beyond the range of native consumption. The importance of fresh fruit can and will increase as the distribution becomes wider. Australia, with the improved methods used in grading and packing fruit, is in a position, because of the short haul, often without refrigeration, to place fresh fruit in the markets of Java at low prices.

JAS. H. LANG.

—Adapted from an American Bulletin.

(Concluding article: "Indian Empire and Ceylon.")

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The Sunbeam Strawberry.

Notes by Henry Prossor, Previously of Red Hill, Vic.

THE HISTORY of the Sunbeam Strawberry has been written by Mr. Henry Prossor, who was a fruit-grower at Red Hill for 30 years: after a term of good service with the Agricultural Department, Mr. Prossor has now joined the fruit exporting firm of J. G. Mumford.

Mr. Prossor gives the following information:—The Sunbeam Strawberry is a cross between an almost unknown variety named Nelius and the popular Trollopes Victoria. Some thirty years ago it became difficult to grow any of the best varieties of the day, that is, Trollopes Victoria, Edith Christy, and La Marguerite.

Owing to the serious damage caused by the larvae of the cockchafer beetle, the root systems of the plants were unable to withstand the attacks of that pest in conjunction with leaf fungi.

On looking round for a more vigorous variety my attention was drawn to the Nelius, the most vigorous plant that I had yet seen both above and below ground. This plant produced great numbers of beautifully colored and exquisitely flavored berries, but far too small for commercial purposes. As our best varieties were even then falling off from year to year, it appeared to me that it might be possible to obtain an improved berry by crossing the Nelius with Trollopes Victoria. The result for several years was many seedlings of no particular merit. Finally, about 24 years ago, the plant which I named Sunbeam appeared as the best result of the cross.

The seed was produced by Nelius.

The new variety stood a most exhaustive try-out, and in a few years had almost displaced all others in its native district, Red Hill.

For a number of years it was enormously productive. During one season the writer marketed without irrigation over 10,000 1 lb. punnets of special and first-grade fruit from 2½ acres. All inferior fruit was left on the plants.

It is a matter of regret that this fine variety has, like most, if not all, of our commercial berries, been allowed to deteriorate through the need of careful selections of stock and other probably avoidable causes.

The writer has only seen one plantation during recent years where the plants and fruit were of the high standard of many years ago. In this case the runners were selected and generously treated from year to year.

In general the plants one sees of recent years are about 50 per cent. smaller and the yield about 40 per cent. less in both weight and quality than of, say, 12 years ago.

As the Sunbeam when properly grown is self-protecting, there is little or no loss through hail or sun scald. The fruit is more sugary and of finer flavor than any other commercial berry.

There seems to be no reason why this variety should not be brought back to its original highly profitable condition by a careful grower. The methods needed would be a very careful selection of stock for 2 or 3 seasons, generous feeding and cultivation, and the keeping in check of fungi to which it is very little subject.

A New Year Reminder:—

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Banana and Pineapple News and Notes.

Gympie.—The annual meeting of the Banana Industry Protection Board was held at Brisbane last month. Mr. R. Veitch, Chief Entomologist, who presided, stated experiments were being made for the control of thrips on plantations at Nerang, Gympie and Cairns.

No permits were granted to remove Banana suckers from districts where the beetle borer now exists into the Currumbin or any clean area. It was reported that growers generally were successfully endeavoring to control that beetle borer by trapping and poisoning. At the present time few localities remain in Queensland where this pest is not found.

Bunchy Top.

The majority of experienced growers are now satisfied that bunchy top can be controlled, but supervision is necessary to see that the control methods were properly carried out. Although protective measures had been taken, bunchy top continues to occur in many districts south of the Maroochy River lands. In fact, in those districts where infection was fairly large 12 months ago, the elimination of badly infested plantations had resulted in minimisation of growers' losses. The patrolling of the areas by the Board's agents and their insistence on the carrying out of the methods advocated had been largely responsible for this improvement.

Bananas for Southern Markets.

With the coming of spring, leaf spot is disappearing, and efforts are to be made to control it before next autumn.

Although New South Wales and Victoria continue to find fault with the grading of fruit the following figures will show that reasonable consideration was being given to this matter at this end. One case in every eight was examined by the agent. In all 1,918 cases were examined out of 8,362, and these came under the scrutiny of the agents, and only 129 were marked down, and 63 condemned outright. Reports received indicate that for the current year plantings which were now in full swing were only light, and in no way approached the figures for the previous year. Conditions generally were fair to moderate, and in some districts are looked upon as being encouraging. In a number of districts old areas becoming worked out were being satisfactorily eradicated, and in a lot of cases further areas are being planted where new lands are available.

Committee of Direction.

The balance-sheet of the Committee of Direction of Fruit Marketing has called forth quite a lot of comment from Banana growers. The cost of administering the Banana Sectional Group Committee was £362, nearly £1 per day for the whole year. The ballot for the acquisition of the Banana industry cost £333. Complaint was made that insufficient experimental work had been conducted.

The Pineapple levy raised the sum of £2,018, whilst the revolving fund payments only amounted to £731.

Railway freights brought in £13,805. It is hoped that refunds to growers will be greater in the coming year, or that efforts will be made to reduce the charges for the carriage of fruit. The meetings of the C.O.D. cost approximately £100 each. The opinion has been expressed



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Yours sincerely,
(Signed) Duncan B. Halhed."

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Queensland Agents—Australian Fruit and Produce Co. Ltd., 6 Ultimo Road, Sydney, N.S.W.

West Australian Agents—Paterson & Co., Perth.

that the meetings of the several Committees cost considerably too much.

Some Associations are advocating the cutting down of meetings by half, putting business men in charge, allowing growers to concentrate on the cultural side. A movement is also on foot to have the salaries of the C.O.D. staff reduced. Some asked that the C.O.D. be reconstructed.

* * * * *

Canned Pineapples.—As a result of Mr. Ranger's visit to England and Canada for the purpose of establishing markets for canned Pineapples, a scheme has been finalised that should give the industry continued prosperity. Messrs. Harrison, Ramsay's and H. Jones & Co. Ltd., have agreed to finance the canning of the crop. Fruit of the following grades will be accepted:—4 to 4½ inches, 4½ to 5½ inches and 5½ inches upwards; flat rate 3/9 at factory or factory station.

The extension of the Pineapple levies, as appearing in the Government Gazette, are:—Smooth-leaf, fresh fruit market 2d. per case, canners 2½d. per case; 2d. per 24 sold loose; rough and Ripley's, fresh fruit market ½d. per case, canners 2½d. per case, ½d. for 42 sold loose.

Mr. Lewcock, Pineapple pathologist, has reported a dangerous disease now prevalent in Hawaii. The Queensland Agricultural Department has been asked to prepare an illustrated pamphlet on this subject.

Bananas at Gympie.—The Gympie Fruitgrowers' Association's packing shed is in full swing. Fruit is arriving in excellent order from the plantations. Mr. Gregory, fruit packing expert, attended on the opening day and gave valued advice.

The Secretary, Mr. Buchanan, reported having attended a conference at Lismore, N.S.W.: he was much impressed with the growth of the Banana-growing industry in the north of N.S.W.; a crop of 500,000-600,000 cases was expected next year. The fruit was of high quality. Queensland, however, would probably produce 700,000-800,000 cases. He was sure there would be sufficient markets for all the fruit produced.

Flying Foxes are attacking Bananas, and a severe poisoning crusade has begun. A ripe Banana is broken in two, punctured in the middle, and a few drops of strychnine poured into the puncture. This baited Banana is then fastened to the stem, ready for the flying fox as it crawls down the stem. This is a simple and very effective method.

The Gympie fruitgrowers' monthly meeting was held on December 1. There were present Messrs. A. G. Stewart (Chairman), W. Adderley, H. Euston, A. Cheales and M. Buchanan (Secretary).

It was resolved that failing the abolition of the Banana Industry Protection Board, the finances accruing to the Board from the case levy be administered by the Banana Sectional Group of the C.O.D. The thrips investigation should be proceeded with.

The Secretary reported that he had not been able to obtain a suitable selling agent in Sydney. The Chairman thought Gympie Bananas would not go to Sydney while Tweed Bananas were being despatched.

In reporting on the meeting of the Banana Sectional Group Committee in Brisbane, the Secretary said it was the shortest meeting on record. The principal resolution dealt aimed at having the C.O.D. review the whole administration in order to effect every possible economy. It was also decided to co-operate thoroughly with the N.S.W. Banana growers. An interstate council was proposed. No revolutionary schemes were contemplated: but effective ripening methods were imperative.

A design for a label was submitted: alterations were suggested for making it more compelling.

On December 8 Mr. Ranger, manager of the C.O.D., and Mr. Flewell-Smith, Chairman of the Sectional Group Committee, addressed growers at Amamoor, Mary Valley district. Mr. Ranger ably set out the facts of the Pineapple situation, and details of his visit to Canada. He believed the future of the industry was promising.

TRADE WITH GERMANY.

Australian Fruitgrowers are Penalised.

Australian fruitgrowers are seriously penalised because of the lack of reciprocal trade arrangements with Germany.

Germany imposes a duty of 2/10 per case on Australian Apples, whereas the duty is only 1/3 on Canadian, American and New Zealand Apples.

This extra tax cost Australian Apple exporters about £75,000 in 1930 and £50,000 in 1931.

Germany is now talking about further increasing the duty against Australia, or entirely prohibiting the importation of Australian fruit because of the lack of a reciprocal trade treaty.

This is a matter which should engage the urgent attention of the Federal authorities.

COMBATING THRIPS.

Success With Dusting.

Mr. A. W. Smith, of Olinda, Vic., writes under date November 24, stating he has been dusting his Strawberry plants with fair results—he used a 20 lb. tin of dusting powder obtained from Mr. Alkemade, of 535 Little Lonsdale-street, Melbourne; the blower cost 10/-. Vast numbers of thrips were killed and the preparation acted as a deterrent. The Strawberries came into bloom and were setting nicely; all round the untreated Strawberry crops were ruined.

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New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

FRUITGROWERS' FEDERATION OF NEW SOUTH WALES.

A meeting of the Board of the Fruitgrowers' Federation of N.S.W., was held at Sydney on December 4, 1931.

There were present.—General J. Heane (in the chair), Messrs. H. G. Such (Griffith), F. D. Inman (Leeton), T. A. Tester (Young), A. E. Herring (Batlow), H. G. Edgell (Bathurst), T. S. McDonald (Gosford), A. S. Brown (Ourimbah), P. C. Best (Dural), F. B. Mackenzie (Kurrajong), W. W. Challis (Kentucky), A. J. Taylor (Singleton), L. T. Pearce (Market Representative), E. E. Herrod (Secretary).

City Markets.—The City Council wrote stating that the space now occupied by rabbit firms and box dealers would be reorganised as soon as possible to accommodate fruit growers. Certain improvements in the growers' section were promised.

Citrus Matters.—It was decided to ask the Government to investigate the wastage in consignments to Vancouver. The President reported that the Minister for Customs had declined to permit the importation of citrus.

Railway Department.—In regard to a conference resolution re charging freight on the basis of the truck ordered when a larger one is supplied, the Commissioners advise being unable to agree to the request.

With regard to overflows, however, in each case where the consignor loads a full truck of perishable fruit and vegetables, i.e., to the minimum weights specified, and he has a quantity in excess thereof for transit, which can be accommodated in another truck loading for the same destination or brakevan of the train concerned, such overflow will be treated as part consignment of the truck, provided the whole of the traffic is for the one destination and the same consignee.

In the case of the supply of BLV. in lieu of a four-wheeled truck as ordered, the "M" class rate for fruit, or "A.P." rate for vegetables will be charged, subject to the respective minimum for a four-wheeled truck.

If the quantity of fruit or vegetables offering cannot be accommodated in one compartment of the bogie louvered van, and provided always that a second truck has not to be used for its conveyance and overflow will be charged pro rata.

Sydney Harbor Bridge Celebrations.—In connection with the pageant being organised a sketch of the proposed float symbolic of the fruit industry was exhibited to the Board, and a request from the Government for the Federation to bear the cost of making the float was considered, and it was decided to agree to bear the cost up to the sum of £150.

Duty on Nicotine Sulphate.—The Secretary reported that the Tariff Board held an inquiry last month into an application for a duty of 2/- per lb. on black leaf 40 and other such products. A case in opposition was organised by the Federation, and evidence submitted in objection to the proposed duty.

Health Value of Fruit.—The Public Health Department advised that every week over 100 newspapers are supplied with articles dealing with public health, and in the majority of such articles the value and necessity of fruit are mentioned. Representations have also been made to the Department of Education with a view to an experiment regarding the value of citrus fruits being carried out and the Federation has offered to make available whatever fruit may be required, and also to transport it to the particular school. It was suggested that the experiment should commence in June, 1932.

REPLIES TO CONFERENCE RESOLUTIONS.

The Minister for Agriculture wrote in reply to the resolutions carried at the recent annual conference:—(1) Regretting that the request for "backyard" orchards to be registered at a minimum of 2/6 could not be granted, as the expense of administration would be too great; (2) The Orchard Registration fee would be retained; (3) The Farm Produce Agents Act would be amended to safeguard Growers; (4) The moisture content of dried stone fruits was being ascertained; (5) The confluent pit or cork was being investigated; (6) Experiments were being conducted at the Bathurst Experiment Farm regarding the practice of combining lime sulphur and other fungicides and insecticides with arsenate of lead; (7) No advantage would be gained in gazetted country inspectors under the Commerce Act; (8) Detailed spraying tests for the control of black spot in citrus are in progress at Mr. W. G. Robinson's orchard at Somersby. Last year's results were published. Further progress reports would be available in two months' time. Tests would also be conducted at Wyong. Scald in Mandarins was also being investigated. (9) Compulsory bandaging for codlin moth would be introduced into districts desiring same.

Regarding the request that the "flat packer" case be permitted for use in all Australian markets for citrus, because of superior ventilation and care of packing, the Department replied that this "flat packer" case was allowed to be used for citrus in all the States except Victoria. Representations had been made to the Victorian Department of Agriculture, and their reply would be sent forward.

As regards maturity standards for Oranges—Departmental officers of N.S.W., Victoria and South Australia, were now gathering data on uniform lines in conjunction with the Australian Citrus Council.

Other N.S.W. Notes on page 47 and 48.

WRAPPING FRUITS AND VEGETABLES.

Successful New System in U.S.A.

According to advice received by the Minister for Markets (Mr. Parker Moloney), fresh fruits and vegetables wrapped in transparent cellulose sheeting, are being successfully marketed in the United States of America under a new system of food distribution.

It is claimed that this system of wrapping ensures the produce being placed on the market in a most hygienic and attractive condition, and substantially reduces loss from deterioration.

In the case of wrapped Tomatoes, it is maintained that loss from deterioration has been reduced by at least 90 per cent., whilst the sale of Cauliflowers and other vegetables has been prolonged by about a week.

The cost of material and labor in hand-wrapping is claimed to be offset by the savings effected as a result of the extended keeping qualities of the produce.

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TOBACCO CULTURE.

Control of Blue Mould.

Blue mould is considered to be the worst disease attacking tobacco plants in Australia. This subject is dealt with at some length by Mr. D. B. Adam, Plant Pathologist, in the journal of the Department of Agriculture.

Blue mould may be carried by the seed or may be introduced after sowing by means of air and water.

The first is possible only if diseased tobacco plants have previously occupied the bed. If seeds be used from disease free plants there will be no risk of introduction by this means.

Once a bed is infected it is impossible to prevent extension. Old seedlings that are not killed may act as sources of infection. Old plants should be pulled up in the autumn and burnt.

Tobacco plants should be sprayed with 1 per cent. Bordeaux mixture before the fungus spores are deposited on the leaves.

The development of blue mould is dependent on air temperature and humidity.

Spraying usually commences in mid-October (earlier in hot districts). Subsequent sprayings should be guided at the rate at which seedlings are growing. In North-Eastern districts spraying at intervals of about 10 to 14 days during October, and from periods of five to seven days during November until seedlings are set, generally provides sufficient cover. The period between spraying should be shortened progressively as the seedlings increase in their rate of growth.

The importance of preventive measures is emphasised, it being believed that if thorough control is effected in the seed bed there will be little trouble in the plantations.

TOBACCO INDUSTRY.

Case Before Tariff Board.

REPRESENTATIVES of the Victorian Tobacco Growers' Association gave evidence before the Tariff Board early in December.

Mr. F. B. Darling, President of the Association, estimated about 5,500 acres of land in Victoria planted with tobacco. He urged that the duty which had been increased from 3/6 to 5/2 per lb. should not be reduced. There were well over 1,000 growers. Up to 500 men were employed on seedling nurseries; the industry was now giving employment to over 3,000 in Victoria alone. The yield per acre was approximately £82/10/-, based on an average crop of 550 lbs. per acre at an average price of 3/- per lb. Growers had spent this year over £100,000 in building and machinery. Some of the benefits from increased production, the witness stated, including the keeping of over £2,000,000, or a large proportion of it, in Australia that was now paid for American leaf. It would also provide employment for thousands of families and subsidiary employment in the timber, implement, iron and fertiliser trade, as well as benefiting the railway revenue.

Mr. L. H. Sambell, Secretary of the Victorian Tobacco Growers' Association, said the growers were satisfied with the present prices which, however, were only 1d. or 2d. per lb. more than they were over two years ago, even though the duty had been increased.

Evidence was also given by Mr. Neil Hanlon, of Shepparton East, on behalf of the growers.

The enquiry was adjourned to Perth.

Tariff Changes Not Contemplated.

The leader of the United Australia Party (Mr. Lyons) and the Deputy Leader (Mr. Latham) stated that the United Australia Party did not contemplate drastic changes to any items in the existing tobacco schedule, and an endeavor would be made in every reasonable way to foster the tobacco-growing industry in Australia.

NEW SOUTH WALES.

Tamworth.—At a meeting of tobacco growers of the Tamworth and Manilla districts, a resolution was carried urging that subject to safeguarding the Commonwealth revenue the present good protective position of the tobacco-growing industry in Australia be adhered to.

Albury.—Tobacco growing has been taken up seriously in the Jingellic-Wallwa district, Upper Murray, where tobacco growing promises to be as important as dairying.

VICTORIA.

Horsham.—About 130 acres were planted this season, nearly 1,000,000 plants being used. Seedlings from this district were widely distributed, some being sent to South Australia. With an average growing season and effective curing, the returns to the local growers should be around £10,000.

Apsley.—Over 200 acres are under tobacco around Apsley and Edenhope. The crop is advancing well, and the leaf appears to be of excellent quality. Some of the leading growers raised seedlings which were sent to Pomonal and other tobacco-growing districts. It is estimated that the pioneer tobacco growers secured an income last season at the rate of £100 per acre.

Pomonal.—Early in December many thousands of tobacco seedlings were transplanted. The early planted seedlings are well established, and growing strongly.

One grower put in 15,000 plants in a day with a planting machine, another grower set out 20,000 plants in a day.

Throughout the Pomonal district tobacco planting machines have been kept fully occupied.

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Cave, F., & Co., Melbourne.
Davis, J., Pty. Ltd., Wholesale Fruit Market.
Millis, A., & Sons, Wholesale Fruit Market.
Lister, G., Wholesale Fruit Market.
McLean, N. N., Pty. Ltd.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Wholesale Fruit Market.
Renouf, R., Wholesale Fruit Market.
Ross, J. W., Wholesale Fruit Market.
Silbert, Sharp & Davies, Wholesale Fruit Market.
Stott & Son, T., Wholesale Fruit Market.
Tim Young & Co. Pty. Ltd., Wholesale Fruit Market.
Vear, F. W., 49 William Street.
Wilson, H., Wholesale Fruit Market.
Woolf, G., Wholesale Fruit Market.
Wholesale Fruit Merchants' Assn., J. D. Fraser, Temple Court, 422 Collins Street, Melbourne.
Young, J. H., & Co. Pty., Wholesale Fruit Market.

Brisbane: **QUEENSLAND.**
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksey & Co., Fruit Exchange.

NEW SOUTH WALES.

Sydney (24/12/31).—The Market Representative of the Fruitgrowers' Federation of New South Wales reports prices as follows:—Apples, Allsop's, large 10/-, med. 14/-, small 9/-; Crofton, large 14/- to 16/-, med. 17/- to 20/-, small 12/- to 14/-; Carrington, med. 15/- to 20/-; Demo., med. 18/- to 20/-; Sturmer, large 14/-, med. 14/- to 18/-; Yates, med. 18/- to 20/-, small 13/- to 15/-. Apricots, local, 2/- to 5/- per ½ case; M.I.A., 2/6 to 8/-; Vict., 7/- to 10/- bus. Bananas, 8's and 9's 15/- to 17/-; 7's 12/- to 14/-, 6's 9/- to 12/- per tropical case. Cherries, 4/- to 8/- per 12 lb. box. Choice S. Aust. Cherries, 13/- to 16/- per half-bus. Grape Fruit, local 17/- to 20/- bus., Californian 50/- bus.; Lemons, 2/6 to 7/- per gin case; Mandarins, 3/- to 7/- ½ case; Navels, second crop, 4/- to 6/- bus.; Valencias, 3/- to 7/- gin case, 4/- to 8/- Canadian case; Gooseberries, Tas. 8/- to 11/- per ½ case, local 4/- to 5/- per ½ case; Figs, 6/- to 14/- per ½ case; Mangoes, 6/- to 10/- bus.; Peaches, 7/- to 14/- per ½ case.

Pines, 9/- to 12/-; Papaws, 6/- to 8/-; Plums, 4/- to 10/- per ½ case; Passion Fruit, Queensland, 5/- to 9/- per half-case, local 9/- to 12/-; Rock Melons, 6/- to 9/- bus.; Strawberries, 6/- to 9/- bus.; Tomatoes, 2/- to 8/- per ½ case.

QUEENSLAND.

Brisbane (29/12/31).—Peaches, 2/- to 5/- case; Plums, Burbank, 3/- to 5/-; Santa Rosa, 3/- to 6/-; Orleans, 3/- to 4/-; Shiros, 3/- to 4/-; Apricots (special), 8/- to 10/- case, others down to 4/- case; eating Apples of the better class (colored), 14/- to 16/- bush. case, other grades down to 8/-; eating Apples in half-cases brought from 3/- to 6/- per case; cooking Apples, 8/- to 11/- bush. case; half-case from 4/- to 6/-; Pears, 3/- to 4/- half-case; Nectarines, 3/- to 5/- half-case; Papaws, 1/- to 3/- case;

Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Whitten, W. J., & Co., Fruit Markets.

Hobart:

TASMANIA.

E. R. Cottier Pty. Ltd., Temple Place, Macquarie Street.
Jones, H., & Co. Ltd., Fruit Exporters.
Peacock, W. D., & Co., Fruit Exporters, and at London.

Launceston:

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

Dunedin:

NEW ZEALAND.

Co-operative Fruitgrowers of Otago Ltd.

London:

GREAT BRITAIN.

Pask, Cornish and Smart, London.
Margeson & Co. Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Poupard, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.

Hull:

The Port of Hull, London and N.E. Railway. Rep., Burns, Philp & Co. Ltd., 7 Bridge Street, Sydney.

Manchester:

The Port of Manchester. Rep., W. J. Wade, 8 Bridge Street, Sydney.

Liverpool:

Johnson, T. S., & Co.

Bremen:

GERMANY.

Fruchthandel, Gesellschaft.

Hamburg:

Asthelmer, P. H., & Son, Fruchthof.
Gustav Bey, Hamburg.
Int. Fruit Import Gesellschaft.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof.
Timm & Gerstenkorn.

Copenhagen:

DENMARK.

M. Asvarisch, Copenhagen.
International Fruit Import Co.

Passion Fruit, 3/- to 7/- case; Cherries, better class 8/- to 10/- box; inferior lots 3/- to 5/- box; Apricots from the south, 7/- to 8/- case; local Mangoes, 2/6 to 3/- half-case; Oranges from New South Wales of the better class brought from 8/- to 9/- case, other grades 5/- to 6/-; Lemons from the south, 7/- to 13/- case; Queensland Oranges, second crop, 3/- to 4/- case; Lemons, 3/- to 4/- case.

WESTERN AUSTRALIA.

Perth (28/12/31).—Apples, Yates, dumps, 16/- to 18/6; Granny Smith, 19/- to 20/6; new season, flats, 4/6 to 9/-; Plums, Shiro, flats, 3/- to 8/- (special to 10/6); Santa Rosa, 5/- to 12/- (special to 14/-, others from 3/-); Dickson, 4/6 to 7/6 (special to 10/6, others from 3/-); Climax, 5/- to 10/-; other varieties, 2/- to 11/6. Peaches, 7/6 to 12/5 (special to 16/-, others from 4/-); Apricots, 7/6 to 15/- (special to 16/9, others from 5/-); Citrus, Valencias, flats, 3/- to 8/- (special to 12/-); dumps, 6/- to 12/6 (special to 14/6); Lemons, 3/6 to 7/6 (special to 9/3, inferior from 2/-); Tomatoes, flats, 5/- to 10/- (special to 12/-, inferior from 2/-); Grapes, open, whites, 3/- to 7/6 (special to 9/-; inferior from 1/6).

TASMANIA.

Hobart (31/12/31).—Cherries (choice eating), 13/3 to 24/- half-case; cooking varieties, 5/- to 7/- half-case; Cherry Plums, 3/- to 3/7 half-case; Tomatoes, 12/- to 15/6 half-case.

VICTORIA.

Melbourne (30/12/31).—The following prices are supplied by the Wholesale Fruit Merchants' Association of Victoria:—Apples, cooking and eating, good quality, 10/-

to 15/-; Apricots, 4/- to 7/- case; Bananas, green, Queensland, 9's and 8's 15/- to 17/-, few special 18/-, 7's 14/- to 16/-, 6's 11/- to 14/- double case. Selected fruit for country trade higher; prices are nominal, demand very limited. Cherries, to 10/- half-case; Lemons, 3/- to 6/-; Valencias, 6/- to 10/-; common Oranges, 5/- to 7/-; Pineapples, Queens, 12/- to 16/-; Ripleys, 10/- to 12/- double case; Peaches, 5/- to 10/-; Papaws, 5/- to 7/-, few special higher; Passion Fruit, 6/- to 12/-, some special 14/- to 16/- half-case; Tomatoes, Victorian, 4/- to 6/-, special higher.

The Melbourne manager of the Federal Citrus Council reports that the fruit market generally is dull. Sales yesterday were as follow:—Valencias, average standard, Victorian and M.I.A., 126 up, to 8/-; below average standard, to 7/-; a few selected lines higher; best unwrapped Milduras, to 10/-; best wrapped Milduras, to 11/-; with a few odd sales to 12/-. A few selected S.A. lines higher. Common Oranges, 5/- to 7/-; few selected lines higher. Grape Fruit, good standards, large, to 12/-; medium, to 20/-; a few selected Curlew lines, 3/- to 4/- higher. Lemons, 3/- to 5/-; few specials, 6/- to 7/-.

RETAIL FRUITERS' ASSOCIATION.

THE monthly meeting of the executive of the Melbourne and Metropolitan Retail Fruiters' Association was held on December 3, there was a fair attendance of delegates.

The Secretary reported that he had seen the Inspectors weigh many packages of peas, beans, Gooseberries and Cherries recently, and the weights were very satisfactory; he trusted they would remain so, but he could not speak so satisfactorily about the Apples that were being marketed, many instances had come under his notice of topping up, in fact some of the Apples were not fit for sale. Shopkeepers had paid high prices for these, and even allowing for the late time of the year it is bare-faced fraud to pack fruit in such a manner. It was also reported that dealers were selling topped-up cases of Apples at the market in growers' stands, and many retail fruiters were being taken down by them, so it was decided to ask the Inspectors to pay particular attention to these people.

Comments on the Retail Trade.

There has been very little improvement in the retail trade during the month. Although the prices of vegetables have fallen considerably there has not been the improvement in the sales of fruit one would expect. Cherries have been too high in price for most people, but Apricots and Peaches are within the reach of all, and are selling a little better. The demand for Apples has diminished somewhat, and the same remark applies to Oranges. Although all berry fruits are scarce, there seems to be plenty for the demand. Lemons are still in abundance, and show no fluctuation in price. Tomatoes are coming along freely and from appearances I should say the quality will be very good this year.

Retail fruiters, in common with fruit and vegetable growers, have had a very trying time this year, and in conclusion, and on behalf of them, I wish to extend to the growers their best wishes for a better and more prosperous New Year than the last was.—Edw. W. Thompson, Secretary, Melb. & Metropolitan Retail Fruiters' Association.

Messrs. J. Hyman & Son, who are members of the Wholesale Fruit Merchants' Association of Victoria, are conducting their business at No. 51, Wholesale Fruit Markets, and substantial quantities of fruit are being handled.

UNWARY GROWERS SWINDLED.

By Crooks Who Pose as Agents.

WHEN the police cleaned up the crooks posing as growers' agents at the Victoria Markets, Melbourne, a few months ago, they did a good job, but they have not put an effective stop to the activities of these shrewd go-getters.

Debarred from making use of the stores adjacent to the markets, they now confine their attention to railway goods sheds at Spencer-street. They are the early birds that catch the worm, for they arrive at the goods yard in the very early hours of the morning and furtively inspect every truck-load of fruit, beans and peas as they arrive from the country. A note is made of the name of the grower and also of the agent to whom the goods are sent, from the tags attached to the bags and boxes.

Having secured a list of growers and their agents, the crooks watch the sales of the produce at the markets, and having also read the prices quoted in the daily press, they send a letter to the grower telling him that they can secure a considerable advance on the prices obtained by his usual agent, and enclosing a few samples of the prices alleged to have been secured by them during the past week. The grower, if he has not been caught previously, falls into the trap and dispatches a consignment to the crooked agent. If the consignment is only a small one, the crook will probably send along payment at a price exceeding the quoted market price. This always brings larger consignments from the deluded grower, but no more cash ever arrives from the agent. Some of the crooks do not even send along a first payment, all they send the grower is a glowing account of good prices obtained by them and an apology for not sending along a cheque. This goes on until at last the grower realises that he has been caught.

It is hard to understand why growers are still foolish enough to trust their produce to a stranger. There are numerous reputable agents with stores at the markets to whom the grower can send his produce and be certain of a fair return, besides receiving a cheque within a day or two of the sale.

All members of the Wholesale Fruit Merchants' Association of Victoria, carrying on business at the markets, are guaranteed by a Fidelity Bond lodged with the Department of Agriculture. This assures growers, if assurance were needed, that contracts entered into between growers and members of the Association, will be honored.

There are other growers' agents at the Wholesale Fruit Markets who are not members of the Wholesale Fruit Merchants' Association, but are reputable firms and are well-known as such in the fruit and vegetable trade. All these firms have spacious stores at the market, and are fully equipped to handle any produce sent to them for disposal to retailers. Any grower, whether he be a grower of fruit or vegetables, has no need to go outside the reputable firms in order to dispose of his produce.

A moments thought, and a perusal of the agents' advertisements in the "Fruit World," will save the unwary from falling into the hands of unscrupulous "agents."

GOOD BOYS.

Mother (telephoning from party): "Johnny, I hope you and Bobby are being good boys while I am away."

Johnny: "Yes, we are. And, Mamma, we're having more fun. We let the bath tub run over and are playing Niagara Falls on the stairway."

New Zealand.

Apples and Pears Good Crop.

Writing from Whangarei, under date December 5, 1931, Mr. L. Haulon gives interesting information as follows:—

Apples.—It may be said there is the prospect of a fair average crop, with the exception of Dunns and Delicious the former, as far as I can ascertain, are a very short crop everywhere in North Auckland, and as for Delicious they are very patchy, perhaps about half an average crop.

Pears generally promise good crops, though fire blight is giving trouble in some orchards.

Plums.—English varieties very light crop; Japanese, early sorts, and Burbank, the usual heavy crops; later kinds short to medium crop.

Peaches.—Christmas Peach (Bell's November), the usual heavy crop—drastic thinning required to get size. Second earlies, such as Mammie Ross and Wiggins, very short crop. Mid-season and late, promise good crops.

Grapes look well, heavy crop in view.

Lemons are in full blossom for next winter's crop; a fair summer crop now being harvested.

Oranges, heavy crop just finished, and good set now on trees for next season.

Fire Blight Not Troublesome.

It is now some ten years since that much dreaded disease made its appearance here, and now, after that fairly long interval it may be said to be nothing like the bogey it was made out to be. True, the Pear grower has suffered most from its presence, and it gives a lot of extra work in the spring time cutting out the infected twigs; it has killed out no commercial orchard where this is attended to, and it may be said it has caused nothing like the loss the Pear midge or codlin moth has cost the grower.

The Apple grower has little cause to fear it. In mixed orchards of Apples and Pears it causes some little trouble on the Apple trees, but the man who only grows Apples has in most cases never seen it in his orchard, and the few who have had it in their Apple orchards have cut out the few infected twigs and fruit spurs and burnt them and that has been the end of it for the season.

In one orchard in which the writer is interested it has appeared three times and caused perhaps a couple of hours' work on each occasion, but for the last five years there has been no reappearance of it.

I have written this in order that no Australian Apple grower may lose any sleep through dread of fireblight appearing in Australia.

Hastings, 23/11/31.—The crop prospects at time of writing, generally speaking, are good. On the fifth of November we had rather a severe, unexpected frost, which did a great deal of damage to all ground crops, and in certain localities some damage to fruits, more particularly Apples. The Sturmer variety was most affected, and in some orchards the crop will be very much below last year.

Peaches and Plums are a good average crop, and should be better than last year.

Apples promised to be a record crop, but owing to frost injury, will probably be about equal to last year.

Pears blossomed remarkably well, and the fruit appeared to have set, but a big dropping has taken place, hence the crop will probably be a little below last year. The red mite has been troublesome on Apples this spring, owing to the very hot dry weather we have been having.

The cool stores that were shaken down, or badly damaged during the earthquake of February 3 last, have been put into shape, and will be in full working order for next season's crop.—Ralph Paynter.

NEW ZEALAND.

Auckland (1/12/31).—Avondale is included in the city area, and is not too adaptable for the production of Apples and stone fruits, owing to the high value of land.

The several orchards in full bearing are showing excellent prospects, for the ensuing season, my own included. Fruit more extensively grown around here are Lemons and New Zealand Grapefruit. The past season, 1931, has been above the average of production, and of excellent quality. Distribution is difficult owing to the large importations of Australian Lemons, which were received on an already over-stocked market. Prospects for next season are particularly good; citrus trees showing healthy growth and a profusion of blossom.

Tomato prospects look at present, to me, rather dismal, owing to large crops and low prices ruling.

About 500 acres are under cultivation to the production of vegetables, which are grown within six or seven miles of the city markets, both land and climate being ideal for the purpose.

In conclusion, I would thank you and your paper for the many helpful points and useful information I have received during the past ten years or more, from perusal of same.—B. Fremlin.

Consign your Fruit to—

J. JAEGER

Telegrams: Jaegagento, London.

FRUIT IMPORTER

18 Bedford Chambers, Covent Garden
London, W.C.2.,

and compare the results with those of the competition.

Try and See.

AGENTS REQUIRED.

Rockhampton

The starting point for the Great Queensland Central Railway has a population of 30,000, and offers a good market for your fruit.

ORCHARD FRUIT SUPPLIES

offer a prompt and reliable selling service. Best Prices. Prompt advices and returns.

Reference:—Australian Bank of Commerce.
Phone: 1584.

P.O. Box, 223. Brand: ORCHARD RTON.



Codlin Moth Control

No Single Pest has Cost the Orchardist More

Eliminate Your Losses

Safeguard Your Fruit

Use—"Vallo" Arsenate of Lead (Paste-Powder)

Why is this "Vallo" product so universally popular?

BECAUSE OF ITS—

WONDERFUL FINENESS,
SUPERLATIVE QUALITY,
OUTSTANDING SUSPENSION,
REMARKABLE KILLING POWERS.

"Vallo" Prepared White Oil

A spray which will kill the codlin moth eggs before they hatch. Unlike White Oil Emulsions, this product contains no added water.

The many tests which have been conducted with this ideal spraying specific have proved, beyond doubt, the many advantages of this oil, when used in combination with Arsenate of Lead for the calyx and cover sprays, and thereafter in accordance with directions.

Victor Leggo & Farmers Ltd. - Melbourne

N.S.W. Distributors—A. Victor Leggo & Co. Pty. Ltd., 9 Phillip Street, Sydney.

Queensland Distributors—A. Victor Leggo & Co. Pty. Ltd., 72 Albert Street, Brisbane.

PORT of LONDON

The World's

■ **Best Fruit Market**

■ *Sales can always be depended on
for best quality fruit at highest
prices.*

Besides its own vast population, London supplies the seaside resorts. Tourists make their headquarters in London and want the best fruit.

London has always been the centre of the Australian and New Zealand fruit trade, and although many efforts have been made to divert it to other ports, the presence of its huge local market with expert distribution agencies will ensure it remaining so.

A well-known fruit exporter, after a recent trip, reports that the facilities for handling fruit are second to none in the world. Every convenience for the sales and showing of fruit are provided, all fruit is sold by auction, and he found that the broker always looked to the growers' interests.

All particulars as regards charges, etc., can be obtained from:

Capt. A. W. Pearse, Port of London Authority, 10 Bligh Street, Sydney

Factors That Influence Success in Poultry Raising.

THERE are certain essential factors to success in poultry raising which should be considered and understood before any person launches into the work. The aim in keeping production stock of any kind is to get monetary returns for the investment and time spent in the enterprise. The essential factors influencing returns from poultry as egg producers can be summed up under the four major headings:—

1. The size of flock kept.
2. The average egg production per bird.
3. Experience of operator.
4. Proportion of adult to pullet females in the flock.

The size of flock kept is very important if profit is to be the result from the labor spent. Too often we note persons attempting to get a living from a flock of less than five hundred layers. Naturally, if a small flock of birds were of exceptional value, it might be possible to make a satisfactory labor income from them, but if the flock is the general average class of stock, kept largely for egg production, size of flock is more important.

The size of flock alone is not the only fact to be kept in mind. Any person taking up poultry farming for the first time must not expect to make profits immediately. The experience of the operator is one which influences the results as much as any other. Good management and understanding are essential, irrespective of whether the birds possess the highest quality or not.

From a general farm standpoint, each farm should have from one to two hundred laying females every winter. Winter egg production is the most profitable, and the winter season offers a better opportunity for the average farmer to give a poultry flock the necessary care to ensure good production. Size of flock is then a factor which will influence the interest taken by the owner. The size of unit should be large enough to make the necessary labor profitable and worth while in interest. The results with the small flock are often not sufficient to encourage the owner to put in good equipment, buy properly balanced rations, and take a keen interest in better stock.

DOUBLE YOLK EGGS.

A reader wishes to know why pullets lay double-yolk eggs. Here is the answer, supplied by "Pacific Rural Press":—

A large percentage of double-yolk eggs are laid by pullets before they are eight months of age. It does not seem to be a question of feeding. Some pullets are more given to laying eggs with double yolks than others. Comparatively few double-yolk eggs are laid in the second year after the hen has gone through a moult.

How the hen lays double seems to be like this: At some point of the oviduct one egg yolk overtakes another and they enter the membrane secreting portion of the oviduct together, where the membrane covers both, and later the shell is put on. Just why one yolk overtakes the other is another question. Perhaps in the pullet beginning to lay the normal function of the egg organs have not been perfected. Perhaps it requires a little training or practice before the pullet can do the job properly. Anyway, there is nothing the poultryman can do to remedy the trouble, except possibly regularity in feeding and care, keeping them contented and avoiding scaring them.

MORE and BIGGER EGGS BY USING KARSWOOD



IN every district some poultry-keepers achieve better results from their birds than others. We venture to say that three out of every four successful poultry-keepers will be found to be users of Karswood Poultry Spice, and the fact that they continue to be users—as many of them have ever since Karswood Poultry Spice was introduced over 16 years ago—proves beyond all shadow or question of doubt, that the use of

Karswood Poultry Spice continues to bring them better results. Karswood Poultry Spice increases the egg output because it is a blood enricher, and it is only by enriching the hens' blood that plenty of rich-yolked, full-size eggs can be produced. Karswood Poultry Spice coaxes, but does not force, because it contains no forcing ingredients. It does, however, contain ground insects, the birds' natural tonic stimulant.

"Much Larger Eggs and Many More."

Dear Sirs,

I may say I have had much larger eggs and many more since using Karswood, and my few fowls I keep in the garden are far better and brighter looking birds since using it. I have repeatedly passed on the good word to many people in a small way like myself. Wishing Karswood every success.

(Sgd.) MRS. L. HUCKLE,
Kew, Melbourne, Victoria.

2/6/29

"Increased Egg Supply and Improved Condition of Birds."

For five years up to 1929 I have kept on an average 50 head of poultry — two breeds only — White Leghorns for eggs and Black Orpingtons for the table. I have used your spices, which greatly increased my egg supply and also wonderfully improved the condition of my birds. Wishing you every success with your wonderful spice and foods for Poultry.

(Sgd.) J. E. FILDAY,
Warrnambool Post Office, Warrnambool, Victoria
MAKE THIS TEST.

Go to your local grocer, storekeeper or produce dealer. Get a 1/- packet of Karswood Poultry Spice, then give it to half-a-dozen of your birds in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

SUPPLIES.
Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices:—1lb. packet, 1/-; 1lb. packet, 2/-; 7lb. tin, 13/-; 14lb. tin, 25/-; 28lb. tin, 48/-.

KARSWOOD

POULTRY SPICE

Increases Egg-Production Without Forcing.

Housing Poultry in Buses.

A Novel Farm.

(Reprinted from the "Australasian Poultry World.")

There is a novel farm in Bedfordshire, England, where poultry is housed in buses formerly used in the streets of London. The motor-buses were scrapped by the London-General Omnibus Company and were subsequently purchased at £5 each by Major Whitehead, of aircraft fame. The number bought by him was 200, and they were installed on a 350 acre farm at Potton. The top decks and the whole of the interior fittings were removed, but the wheels were left in order to move the buses from place to place if necessary. The buses are being used to house young stock, and for trap-nesting. The actual cost of each bus after it had been converted into a poultry house was £12/10/-.

Each house has a range of 24 traps fitted, 12 on each side, raised from the floor. The floor is of slats, but it is not a slatted floor of the type usually used. Instead of the whole of the floor being open below the slats there is a wooden floor with three oblong spaces cut down the centre of the floor. The only other ventilation is at the top of the glass sides—the ordinary fall-in ventilators seen in buses.



Powdery Mildew.—For the control of powdery mildew, a fungus attacking twigs and fruit spurs, the Victorian Superintendent of Horticulture, Mr. Ward recommends spraying with a mixture of one gallon of lime sulphur, 3 lb. iron sulphate, and 50 gallons of water. This spray is used in conjunction with lead arsenate throughout the summer months. Another spray is 1 lb. atomic sulphur and 12 gallons of water. Some growers in the orchards of North-West Victoria were spraying at the rate of 2½ lb. to 50 gallons of water. This solution, states Mr. Ward, is not sufficiently concentrated.

THE SEED SHOP.

Here in a quiet and dusty room they lie.
Faded as crumbled stone or shifting sand,
Forlorn as ashes, shrivelled, scentless, dry,
Meadows and gardens running through my hand.
In this brown husk a dale of Hawthorn dreams,
A cedar in this narrow cell is thrust
That will drink deeply at a century's streams;
These Lilies shall make summer on my dust.
Here in their safe and simple house of death,
Sealed in their shells a million Roses leap . . .
Here I can blow a garden with my breath,
And in my hand a forest lies asleep.

—Muriel Stuart.

LIGHT APPLE AND PEAR CROP IN N.S.W.

Apples Estimated at 444,400 Cases; Pears 244,100 Cases.

The Official Estimate of the Apple and Pear crops in N.S.W., to hand from Mr. A. A. Watson, Director of Marketing, is as follows:—Apples, 444,400 cases; Pears, 244,100.

Apples.

Owing to the damage caused throughout the State by thrips and late frosts in the northern tablelands, there has been a generally patchy setting of Apples.

The yield prospects of Granny Smiths are disappointing in all districts. In many orchards this variety has failed to set any fruit. Jonathans have better crop prospects, and the best yields, although not heavy, should come from the Batlow and Orange centres.

In some localities Rome Beauty, McIntosh Red, Pomme de Neige, London Pippin, and Cleo. give promise of moderate yields. Carrington, Gravenstein, King David, Buncombe, Tasma, and Delicious, as well as many other less prominent varieties, are very lightly cropped, and in many orchards no marketable crop is in sight. On the irrigation area prospective yields of all varieties are below normal.

The estimated yields (in varieties) are as follows:—Jon. 147,000 cases, G.S. 68,200, Londons 66,300, R.B. 52,800, with smaller quantities of McIntosh, Cleo., P. de N., Gravensteins, etc.

Pears.

This crop has also suffered as a result of thrips and weather conditions. In the Orange district shedding of the fruit has been above normal this season, and to some extent continues. Late frosts have considerably reduced prospects on the northern tableland. Only a light yield is anticipated throughout the State.

Moderately good crops of Williams are showing in the Bathurst, Blue Mountains, Capertee, Rydal, and Orange districts, and generally over the irrigation area. Winter Coles, Winter Nelis, and Josephines are practically a failure in the Batlow district. Many varieties failed to set any fruit, particularly in orchards from Goulburn to Moss Vale, and in the Young district.

Estimated yields are as follows:—Williams 141,000 bushels, Packhams 44,800, B. Bosc 22,150, W. Cole 7,650, and smaller quantities of Jos., Keiffer, Howell, Caps, etc.

N.S.W. BANANA GROWERS.

Office-bearers of the N.S.W. Banana Growers' Federation are as follows:—President, Mr. H. L. Anthony; Executive Committee, Messrs. H. S. Scullin and C. Clisold (Coff's Harbor), E. J. Meaney and A. J. Scarabolotti (Richmond), F. R. Tandy (Brunswick), F. R. Halliday and H. A. Stevenson (Tweed).

SUGAR AGREEMENT.

Strongly Criticised in Tasmania.

Senator Sir Hal. Colebatch is supported by the Tasmanian branch of the Australian Sugar Consumers' Association in his desire that the Federal Parliament should pass a bill "to prevent Ministers, by proclamation, or Ministerial rulings or agreements, from taxing the community without Parliamentary sanction." Tasmanian Senators have been asked to support Senator Sir Hal. Colebatch in this matter.

It is pointed out that at present the Prime Minister has assumed the right of signing the Sugar Agreement, committing the people of Australia to the extent of £8,000,000 a year without first obtaining Parliamentary sanction. This committed the people of Tasmania to pay £360,000 a year (or £1,800,000 for five years), which would employ 1,700 Tasmanians each year at £4 a week.

BONUS AT LEETON.

Leeton (10/12/31).—The Leeton Cannery has decided to pay a bonus of £2 a ton on all fruit of canning quality handled during the 1930-31 season. The Leeton Cannery closed its season with a trading profit of £5,775, as compared with a loss of £7,106 during the previous year.

Albury.—Fruit crops hereabouts are light. Many trees are practically bare. Granny Smith and Delicious Apples are very light, but Jonathans and Cleopatras are better. Williams' Bon Chretien Pears are the best, followed by Beurre Bosc. Prunes are exceptionally light, and Peaches are only about 30 per cent. of a normal crop. The heavy rains and thrip are contributory causes of the failure.

YOUNG.

Assistance to N.S.W. Prune Growers.

Mr. T. A. Tester, a member of the Board of the Fruit-growers' Federation of New South Wales, was in Sydney early in December in connection with the advances made to growers on their 1932 Prune crop by the State Savings Bank. The crop, however, was practically destroyed by thrips.

Mr. Tester advises that the Commissioners have decided to extend the period of the loan until the Prunes now held by the growers are disposed of. The amount involved is about £3,500.

Tenterfield (30/11/31).—Mr. Peter Sommerlad gives crop notes as follows:—

Cherry crop., fair to good

Peach crop, good.

English Plums, very light; Japs., good.

Apricots, very light.

Pears, Williams and Beurre Caps, good, also Howell's; all others very light.

Apples, Smiths, Democrats, Scarlet Pearmain, Commerce and Fanny, heavy crop; Jonathans medium. Thrips

were present, but not in sufficient numbers to do any serious damage. Frost caused some damage on the low-lying areas.

DRIED FRUITS.**Markets in Canada.**

Mr. R. M. Eldridge, of Co-operative Dried Fruit Sales Ltd., of Melbourne, arrived back from America by the steamer "Monowai," on December 19. He said the prospects for the sale of Australian dried fruits in Canada were very good. The tariff treaty had greatly assisted Australian fruit growers, and there was a growing spirit of inter-Empire trade developing in Canada.

MARKETING CITRUS FRUITS.

It is of interest to note that since Mr. G. E. Kitchen Kerr was appointed Market Manager for the Federal Citrus Council in September, 1928, he has supervised the sale of no less than 1,300,000 bushels of citrus fruits consigned to the Melbourne market by members of organisations affiliated with the Federal Citrus Council.

Of this total 490,000 was sent from the Murray River districts of South Australia.

The work of supervision involved the organisation and regulation of supplies coming forward, and the fixing of minimum prices at which the various grades and varieties of fruit were sold.

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We are advised that Messrs. Geo. Wills & Co. Ltd., of Adelaide, South Australia, have transferred their offices from Grenfell-street to their new premises, Gilbert House, Gilbert-place, Adelaide.

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Instructions for Taking Soil Samples.

The soil surface is first cleared of all plant residues and a hole is then dug by driving a spade into the soil to plough depth at a steep angle. From the steep wall of this hole a layer of about 1½-2 inches thick is carefully cut away with the spade. The samples thus taken at different points of the field are all collected in a dry, clean tub, wooden box, or in the case of larger areas, a

clean hand-cart. The soil is then thoroughly mixed on a dry clean surface (a cement floor is most suitable for this purpose), and spread out in a layer of about 6 inches thickness. The surface of this layer of soil is then divided into eight squares of approximately equal size, and from the middle of each square a sample of about ½ lb. is taken. These samples are then well mixed together and spread out exposed to the air for about 24 hours to dry. Care should be taken, however, that the sample is not exposed to the sun. Finally, from this air-dried sample of 4 lbs., about 1 lb. should be put into a clean

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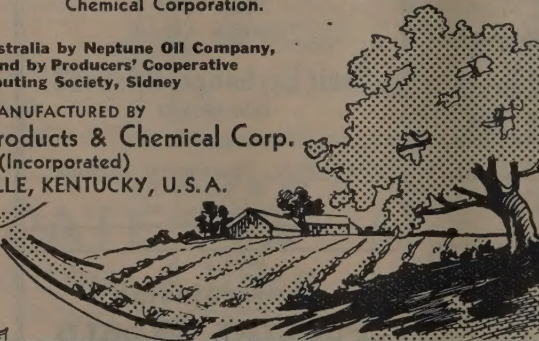
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tin, or calico bag and forwarded, for analysis. A question sheet should be filled in for each sample submitted, and the samples and question sheets distinctly marked, so that they can be identified in their proper pairs.

Questionnaire.

1. Name of orchard. 2. Full postal address and nearest railway. 3. Nature of principal crops. 4. Type of soil.

5. Depth to which soil is cultivated. 6. Nature and depth of subsoil. 7. (In case of annual crops), is any rotation practised? If so, give details. 8. Average yield per acre of principal crops. 9. What fertilisers have been used during last five years. 10. What was effect of the fertilisers. 11. Average rainfall, temperature, etc. 12. Additional remarks.

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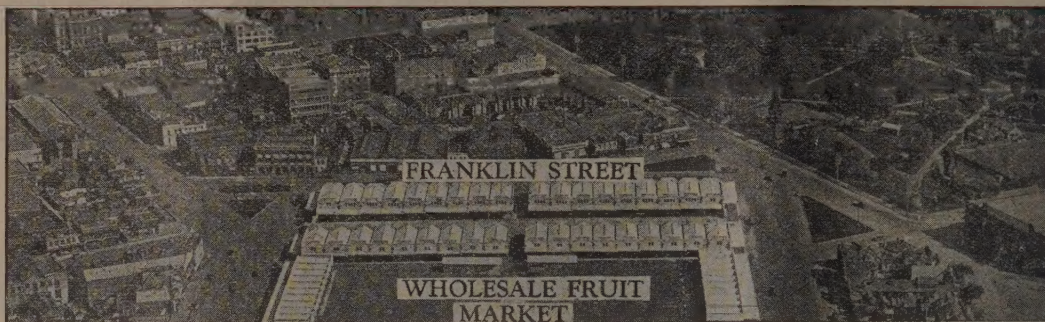
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